Hugh Cecil Earl of Lonsdale.

174 Conversations on Conditioning The Groom's Oracle, and Pocket Stable Directory; in which the Management of Horses generally, as to health, dieting, and exercise, are considered in a series of familiar dialogues, between two grooms engaged in training horses to their work. With notes and an appendix, including extracts from the receipt-book of John Hinds, V.S., Author of "The Veterinary Surgeon" [John Badcock]. London. 1829.

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CONVERSATIONS ON CONDITIONING.

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The Two Grooms Exercising

A Trial in the Distance

CONVERSATIONS ON CONDITIONING.

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AND

POCKET STABLE-DIRECTORY:

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BETWEEN

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ENGAGED IN

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WITH

NOTES, AND AN APPENDIX,

INCLUDING

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AUTHOR OF "THE VETERINARY SURGEON."

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PREFACE.

"THE *Grooms' Oracle*" was an epithet bestowed, about twenty years ago, in derision, upon one of the *best books* that had hitherto appeared, in this or any other country, on the *Veterinary Art*. *The best,* because the easiest to be comprehended by the generality of persons engaged in that pursuit; and, therefore, likely to become more extensively useful than any of its cotemporaries, notwithstanding its *extra-learned* detractor meant thereby to abash its author, since he discovered that his attempts to smother both author and book in the bud had signally failed. The same particle of information was alluded to, in the *Preface* to "The Veterinary Surgeon," published eighteen months ago, and is now again adduced principally as an apology for the present *title,* as well as to cast a triumphant rebuke in the teeth of those who would smug the curative art within a circumscribed space. What they have done in the like spirit, regarding the book just cited, as it was equally unjust, so has it proved quite as unavailing with the public: inapplicable criticisms, that are founded on misrepresentations, grounded on garbled quotations, can do no service to the falsifying parties, only in the same manner as the rod which truants at school are compelled to gather for their own backs.

Yet the bare *appearance* of assuming *oracular*

wisdom would have been abandoned after the first impulse, as inconsistent with the characters who support the dialogue, and quite at variance with the progress of common-sense knowledge, that is derived from patient observation, but for the cheering approbation of some half a score prying friends, who had perused the manuscript at the time of the first July Meeting, last year, and would hear of no other title than "an oracle," which should dictate to the whole groom genus who had been, from time immemorial, "every man his own oracle." No matter whether pad-groom or training-groom, my lady's groom or hunting-stud groom, each was formerly the Sir-Positive of his own circle, and each a stickler for his particular opinions as to the *practical management* of his horses, though these varied from each other as the poles asunder; whilst not one among them condescended to give *reasons* for his opinions or practice, were it in his power. They could not, of course, be *all in the right*, if even *one* among them were so at the period in question; therefore might the author first spoken of (James White) be justified in his frequent rebukes of *the grooms of that day;* who, in return, decried him as "no friend to grooms;" and they threw aside his book, or scouted his tuition, until the *new lights,* which the last thirty years has spread abroad so wonderfully, began to shine upon the stable also. They had the grace, notwithstanding those rebukes, numerous as they

were, to benefit by them; or they felt sufficiently indignant to rise superior to future castigation from forthcoming *Veterinarians;* so that we are enabled to derive great pleasure from acknowledging, that the present race of grooms, of every gradation, have rescued their character (collectively) from a repetition of the like attack. At this day, THEY READ, and that is sufficient guarantee that THEY STUDY: may they *digest* and practise the intellectual treat to which we know so many are invited by their employers.

Grooms of to-day, then, are not the grooms of thirty to twenty years ago! They possess as much intellect as other persons of the same standing in society, it is presumed; whence we are emboldened to ask, without fear of giving offence to a large class of meritorious persons, how it comes to pass that so many horses die under their hands whilst training for the course or the chase? For, the solution of this question is the foundation of all the inquiries set a foot, and resolved in the present volume. This also constitutes our apology, if any be necessary, and is the reason for printing another volume on *Horsemanship,* so soon after having given to the world a somewhat elaborate treatise on the physiology and pathology of the *Horse,* which might seem to have exhausted the subject of his ailments. But, there are other and more remote *causes* of disease than the immediate and recent ones therein described, which are brought

on by the neglect or the inadvertence that constitutes *mismanagement* of man; whilst he who thinks he can never do enough, in anxious mood, will for ever be doing *something*, until he commits the mistake of *overmanagement*. Among the latter (will it be believed out of school?) must be reckoned overfeeding, warm clothing, and hot stabling; whilst the contraries, poor feed or irregular, exposure, and uncomfortable stables, belong to the first series of blunders. Both errors fall, unhappily, on the *better description of horses*, (see page 114,) upon the welfare and fitness whereof immense fortunes are annually staked, 1st. in the prime cost, or breeding; 2d. in bringing up properly to go through their *work*; 3d. at the post, in performance, &c. &c. Whence results an aggregate sum, equalling, almost, the capital employed in the staple manufacture of the kingdom.

On the *second*, or intermediate point, what care do we not bestow, what expenses lavish, *in training* our first-rate cattle to win! How we sometimes fail, after all our care, is worth all the pains we may bestow in the inquiry. We may even save time, and trouble, and expense, and immense anxiety, by investigating in the parlour, what ought to be done in the stable, according to the test of experience of others; for this is really the age of improvement in the arts of life, and of veterinary knowledge as much as any; though the communicativeness that marks the spirit of libe-

rality in almost every other, hath not extended itself to the art of training. So truly is this the case, and so great the dissonance of opinion as to what is right or what wrong in the process, that every horse which *dies in training* (and they have been lately estimated at *three* in *eleven)* may safely be said to *die of training;* and as *purgatives* and *cordials* are the most active materials by which the people employed in this business hope to accomplish their object, and they use both unreasonably, such horses may be considered as being "purged to death," or morbifically *cordialled,* until phrensy or visceral inflammation relieves the sufferer of existence; or else, haply falling short of this acute species of attack, a comparatively short time reduces a valuable animal in the scale of beings to which it belongs.

*** Regarding *the Veterinary Surgeon,* to which I have taken frequent occasion to refer for more minute details than seemed befitting the present volume, I may here aptly enough say a word or two. We never made a secret of the share my friend, *Mr. Badcock,* had in the composition of that book; the fact might be known to a hundred or two of persons several years past, and, lest this should not prove satisfactory to the prurient eyes of those critics who pretended to *make a discovery,* a full statement thereof was made, fairly enough, in the *Annals of Sporting,* for May, 1828,

pages 344-6. What is more, we have been daily making additions to that volume, particularly during the last winter, of all the improvements and new lights that are daily thrown upon this novel and interesting study; we are more than ever convinced that "two heads are better than one," though one of them be that of "a blacksmith's son," as they aver; nor could I have acted more wisely, I am told, than rely upon the pen which had been mainly instrumental in producing, twenty-five years ago, "the best book which had hitherto appeared, in this or any other country, on the Veterinary Art," as I observed on setting out. See, also, my expository Preface to my former volume.

And now, to end all discussion upon the subject, as to *which of the two*, or what part each has taken, or any other surmise in which the *quidnunc* part of the Press love to indulge—as happened in the celebrated *Bampton-lecture discussion*, in which *Samuel Badcock* bore so honourable and very similar a part—I now declare my intention to be, regarding the forthcoming *enlarged edition* of my VETERINARY SURGEON, to append thereto, in some way or other, the name of my friend, *John Badcock*, as a mark of respect, to prove its authenticity, and to add his avowal of the interest he has taken in the complete performance of our engagements with the Public. J. H.

Bridport-Place, Hoxton,
Feb. 28, 1829.

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THE

GROOMS' ORACLE.

CONVERSATION I.

Introductory: general Health; Prognostics of Disease; the Pulse, how available. Inbred Disorders: Young Animals and fresh ones. Groom's first Duties.

"It is better to prevent than to cure; to reclaim than to punish"

——A FEW cursory remarks, only: No apologies, I apprehend, will be required?

A. None are necessary: proceed, freely; and with as much order as you can conveniently.

Q. What is the first duty of every good groom?

A. To ascertain the state of health the horses, at any time placed under his care, may be in; to preserve them in that state, at least, and to find out the seat of any ailment, and the *cause* thereof, so that it may be removed as soon as possible, or, at any rate, alleviated; for you cannot reasonably hope to keep a horse in working condition whilst he suffers pain.

Q. Or inconvenience, we may add?

A. Yes; when speaking of high-bred cattle.

Q. Be he never so fat, the least pain of long continuance throws him out of condition, I observe?

A. *Fatness!* fatness is not necessary to *condition*, though 'tis *proof* of it, unless for slow draught-horses, for your London merchants, who love to make a show of their teams. Hunters, stagers, and roadsters, that require the powers of *going* to be combined with *strength*, should not be *fat*—racers least of all. Do we not hand-rub and otherwise dress them, till our arms ache, for the very purpose of circulating the blood and thereby reducing the size of the muscles, and the *fat* above all. Never talk of *fat* again for fast-working animals, as 'tis an impediment to their speed.

Q. I know, I know; strong exercise and regular physic will alone keep your running-horse up to his paces. But how do you proceed with a fresh horse, now, generally speaking?

A. By watching his *mode* of feeding; by ascertaining whether he be craving for water, a ravenous eater, fretful, or otherwise; judging by the quality of his dungings, as to colour, consistence, and frequency, whether he has been MADE UP; and, by his urine and perspiration at exercise and in the stable, also whether he suffers any obstruction internally, to say nothing here of his appearance upon *the view*, which may have previously deceived the purchaser himself, or 'tis to be presumed it would not have been bought at all.

Q. *Made up* on purpose for *sale*, possibly, by such treatment as will assuredly prove the ruin of the animal in a short time after he comes to the stable.

A. Its whole system excited, and its health undermined to such a degree by *cordials*, and figging, and "things for his wind," and those "good for his eyes," that it never fully recovers the effects of so much excitement.

Q. But looking fine, brisk and sleek, nevertheless?

A. Yet being actually very *tender*, in consequence of the means employed to make him look so. Such new purchases usually acquire diseases of the *lungs*, or of the *skin*, the first day of taking them home, or 'tis much else.

Q. Unless you continue the same treatment; the decoction of linseed, for example, can do no harm for a little while.

A. Nor any good, except with a view to re-sale; an event the real gentleman does not look to, you know. But some stand in immediate need of *physic*, their bellies being so drawn up at the flanks by the fiery *things* given them by the dealers, to inspire a short-lived vigour, that inflammation of the intestines is to be apprehended.

Q. Or the solids so much affected from a *continuance* of the same excitement, that, upon pressing your finger upon any fleshy part of the carcase, the indentation remains awhile.

A. Whereas, the flesh of horses in full health,

and young ones, obliterates such a pressure instantly. Yes, yes, at all events, give to newly-purchased horses plenty of bran-mashes or dilute water-gruel in the first instance, to neutralise the offensive contents of the stomach, &c. and procure the three evacuations. Should these not come on regularly, or the urine and dunging be of a bad kind, hide-bound, and other diseases of the skin, follow; as they do the disuse of habitual diaphoretics, as *sweating powders* and the linseed decoction you just now mentioned. We should study the defects of our new acquaintance, however ungracious the task, especially if it be one we would make free use of, as we do of the horse.

Q. He may have been originally ill-formed, and so the inheritor and possessor of some family disease, as narrow-chested (bad lungs), hollow-backed (injured kidneys), and the like.

A. True; but I would also desire to discover his acquired disorders, that lie concealed from the sight and the touch, that are brought on by accident or by misapplication of his powers.

Q. Of what nature is the principal of the less evident disorders of horses?

A. *Heat.** Inordinate heat, occasioned by the

* A very grave gentleman suggested, that *physic* was the principal ailment of the horse, not so much on account of ignorance in the compounders, as of the motives to prescribing; which would superinduce giving *too soon* and continuing too long, the very best remedies,—or what the interested party would call "regular treatment."

great exertions the animal is compelled to make; and, when excessive, the bad effects thereof descending to the feet and legs, we invariably find these affected with some defect or other, which every act of progression does but exacerbate, especially if the pace be quick: the pain then endured at the extremities re-acts upon the carcase, or some vital part within it, and though it may produce no marked disease, irritates the stomach and intestines, and prevents the food from doing good, or 'tis rejected altogether, whereby the horse goes out of condition.

Q. But you would not extend this observation to mere accidents, and the wear and waste of *going?*

A. Yes, I would, in great measure; the aggravation we sometimes find to attend the most trivial prick of the foot, or touch of one leg by the foot of another in training, being wholly attributable to the bad state of his blood at the time of its occurring; for, do we not know that such injuries sometimes happen and go away again without any medical treatment whatever, or any imaginable reason than comparative rest and good bodily health prevailing at the time?

Q. How would you come at a knowledge of this *bodily health*, as you call it?

A. By the practice of feeling the pulse frequently, whereby we ascertain the degree of heat, and other interesting information of what is passing

withinside. I can go through this part of my duty with our stables full of horses, in half an hour daily, including the time necessary for making my remarks upon such as require it. Owing to the thickness of the skin, however, I find you must regulate the pressure of your finger point, so as neither to stop the pulsation entirely, by pressing too hard, nor by the direct contrary allow yourself to be deceived on the score of indistinctness in the beats.

Q. On what artery is the thinnest skin found?

A. Near the *eye*, at about an inch and a half from its corner; but a *larger artery* may be consulted more instructively, underneath the edge of the jaw-bone. The heat and dryness of the mouth is also a sure indication of fever.

Q. Well; and if the pulse beat *quicker* than ordinary, what opinion should you form upon it? What if *slower* than common?

A. In the first case, I should conclude the patient had an access of fever, which is always the case, temporarily, when the animal has been put on his mettle, and the more so, when he goes in pain; so, on the contrary, if he feed badly, or has some languishing disorder of the liver, as obstruction thereof, jaundice, or low fever, his pulse would be slower than usual.

Q. What, then, do you consider the common medium of pulsation, or healthy state?

A. It varies a little, according to circumstances, and the breed of the animal, from thirty-six to forty beats in a minute, the pulsation of large heavy horses

being slower than that of the smaller breeds, and that of young horses quicker than old ones of their own kinds respectively.*

Q. Are there no other indications given by the pulse of the animal's health?

A. Undoubtedly: *unsteadiness* of beating is a sure sign of something being amiss with the nervous part of the system: fluctuation in the beating of the pulse tells us, as plainly as words can, when the animal has been flurried in any manner; if by ill-usage, the beats increase in quickness, a few strokes hard, followed by a fewer still very low; if the agitation has been caused by pleasurable sensations, as the sound of horn or hounds, or the near approach to *home*, then the number of low indistinct beats exceed the hard ones. Animals of bad temper, those with defective eyes, or skittish ones, that are apt to shy, and mares in heat, all evince this irregularity of pulsation; whereby I first learned to come at a knowledge of each individual's disposition, and I take care to treat him accordingly.

Q. That is an excellent distinction of yours; I have an idea it may be pushed much farther, to the benefit of the noble animal we are now discussing.

A. Undoubtedly, the placid horse which is kindly and docile in his nature, will be found with an equal

* So is the blood of all *young* thinner, paler, and quicker in *the circulation* than that of old animals; age increasing its colour, its thickness or viscidity; and its resistance to the contraction of the containing vessels is consequently greater, therefore slower in motion.

moderate pulse; whilst that of the voracious, tear-away, craving horse, which is never still, never satisfied even when foremost, and his *pulse* shall be from four to six beats a minute quicker than the first-mentioned, and not regular.

Q. We will enter more fully into the distinctive attributes of the several classes of prime horses at some future opportunity. [*Conversation* ix.] Meantime, have you aught further to say concerning *the pulse?*

A. Not at present. I shall reserve somewhat I have further to observe, until we come to talk of inflammatory fever and of bleeding; in both which respects, my plan of daily ascertaining the state of my horses' pulse in health has been found of critical benefit by the *actual doctor*, when he is called in, as sometimes happens, to consult over a patient. [See APPENDIX, *Pulse.*]

Q. Do you, then, keep a register of the state of your horses' pulse?

A. Yes; of valuable ones, regularly, throughout the year, along with my Stud-book, Racing Calendar, Trial-book, and accounts. You form a library of the same materials, do you mind me, with a couple of books on Farriery, and read them with attention; you'll ride none the heavier for it. As to ordinary or working cattle, they are not so readily affected, nor so dangerously, as horses with some breeding in them, and require less care.

Q. Neither do they require routine *physicking*, like the thorough-bred horse, *flesh* being no incum-

brance to them; and nature, with the casual relish of green food, doing for such animals all that is necessary.

A. Yet, notwithstanding I can recollect tolerably well what state of health every horse is in by a hasty touch, I like to put down my remarks on *the book*, when any alteration takes place, to look it over at my leisure, that I may compare one season with another, and the state of one animal with that of another, and all with any change of circumstances. I once had an employer who called the pulse "the index of health;" and at one time he observed that it "resembled *the thermometer*," or weather-glass, which hangs up in the stable.

Q. Very like, indeed. By these means, I perceive how persons may also obtain a good insight of each animal's temper; for every one has its peculiar disposition, like mankind, and each requires a different treatment.

A. To be sure they have; all different, according to the breed, the gestation and rearing,* the

* Inconsiderate persons about every farm, almost, who admire the gambolling of foals, too frequently *set them off*, for their amusement; and when they are taken in, the boys will often play tricks with the younkers, and teach them pranks the animals never forget: the habit of shying is thus engendered, and leaves us in doubt whether defective vision may not have been caused by this evil habit, as well as causing it. The optic nerve, by being constantly employed and excessively strained at every bugaboo sight, is thus disposed to occasion an access of humours at the part, more than is required naturally to supply the *æquous humours* thereof.

manner in which the mounting and breaking, the shoeing, grooming, and exercising, have been conducted, with other *misusage*; to say nothing of some inward disorders with which certain horses are afflicted from the time of foaling, or shortly after, which shews itself in a vicious disposition that nought can cure, though we may alleviate such, by gentle means,—and by these only, in our approaches to the afflicted creature.

Q. Stop. *Misusage* is a very undefined expression. What one person would consider so, another might look upon as quite necessary;—chastisement, for example, of a hard-mouthed, country-bred, headstrong horse;—it must be rendered tractable, you know, cost what pain it may.

A. And never fails to become so under my management, nor when employed in its proper work from the beginning, and not pushed onwards, flogged and constrained to exertions beyond its powers, particularly whilst young; nor at any age, while suffering under any well-suspected malady.

Q. Shoeing particularly disobliges some horses, every fresh shoe being the signal for a fresh battle between smith and horse, the man attacking the animal, as 'twere, in the determination of performing that operation by *force of arms*, which a little coaxing would have effected equally well—if not better.

A. Horses so treated must, I think, be considered as *misused* creatures, without taking into account the capricious tempers of certain proprie-

tors, and keeping quite out of view those occasions when some of them get into jolly company, and thereupon become careless of their own health as of the valuable animals committed to their charge. You may have observed that an ill-tempered breeding farmer generally rears vicious horses; the evil, in such cases, usually beginning with the mares in foal, whom he scares, or keeps uncomfortably, or works the mother up to the eleventh month.

Q. This she communicates to her offspring. I'll give you a case in point, as to this fact, of a half-bred mare, belonging to a Cambridgeshire farmer, which produced five or six times, and every foal grew up as fretful and ill-tempered as it was finely shaped and full of fire; and all sold at high prices, too, though all committed some mischief or other. One three-year old colt nearly killed the farmer himself; and, being sold to a neighbour, *Gazzam* by name, his new master reclaimed him by gentle treatment and *steady usage*, taking especial care, however, not to over-feed him at any one time, nor too much upon the whole: this he did on the principle that distension of the stomach of young animals always engenders evil disposition, and fills them full of humours—which appear in the form of tumours, of strangles, lampas, and similar luxuriance.

A. That is to say, the stomach governs the temper. In this lies the secret of all *animal management*, and that of the temper as much as any thing, since you thereby act upon their hopes and expectations of gratifying the appetite as much as on

their fears of the lash; in lieu of which the groom can substitute his voice in the correction of any vice he may discover, whereas hasty, petulant correction does but confirm it the more. With this end in view, I always attend to the feeding and rubbing down every new purchase, of whatever kind, my employer sends into the stables, the better to ascertain its temper, to notice its *manner of feeding*, to watch the state of its blood, which marks the distinctive character of most horses, as much as its *quantity*, and to make such other close *observations* as may enable me to perform my duty as I ought, and which points of intelligence are only to be acquired by those means.

Q. You are a man of acute perception, I see, and well deserve the confidence placed in you; may you meet your reward.

A. I have that already, in the health that prevails in our stables, one and all, and the commendations bestowed upon my management by the noble and distinguished visiters to them: as to *money-rewards*, they come as matter of course; I am made quite easy on that score, as we scarcely win a race but I find myself remembered in some shape or other; not so much (I observe) in proportion to the *amount* of the stakes, but, as appears to me, according to the exertions made, and the goodness of the cattle we may have been opposed to. I like that vastly.

Q. Then, a "walk-over" is not to your taste?

A. Not a bit of it: give me a neck-and-neck

win against the best bred cattle in Christendom! I don't care where they come from. How the thoughts of such a race make my old heart to mantle!

But your inquiries do not so much tend to investigate the particular economy of a *racing stud*, I perceive; unless in that general way wherein this agrees with the management of *half-breds* (as we call the main class of horses) and labouring cattle, not forgetting your *well-formed* hunter, which, if it be not *three-quarter bred*, should at least be strong built, well upon the haunches, and of robust constitution. Come, come, I begin to discover that you desire to worm out of me not only all I *know*, but whatever I may *think* upon the subject; but, in saying this, I mean not to object, for I am no undelightful churl, and shall answer freely all your questions. Let us confine our talk to the *preliminary* at first, or that mistaken course of treatment which superinduceth disorders, as well as the means of avoidance: it is better to prevent than to cure,—more humane to reclaim than to punish. This sentiment is not new: our countrymen have long learnt that the necessary operations—as dressing, shoeing, and exercising, are as well accomplished, if not better, by coaxing and watching the temper of horses, as by that constant coercion, force, and brutal language, which formerly disfigured our stable-management.

CONVERSATION II.

The Foot: Lameness in general; how produced; and of particular Accidents. Racers; contracted Hoof; internal Causes; Founder; Foot-Fever; bleeding Hunters; run at Grass; stopping.

A. True; *lameness* may proceed from several causes that may not reside in the foot at all, or, at any rate, not *originate* there. The inquiry as to which of these exists at any time, and how it has been brought about, is of primary importance towards its removal.

Q. With what anxiety every one examines the feet of his horse, or one he is about to purchase! And not without reason; however good in every other respect, if he fail in this he is good for nothing.

A. Less than nothing; he is an encumbrance. Lameness frequently comes on in the fore legs without other cause than *brisk work*; it goes off after having puzzled us in searching for the seat of pain, and returns again on a repetition of the same fast-going—until, at length, 'tis found incurable.

Q. Therefore is it extremely desirable to provide an early remedy, when we have discovered whereabout to apply it: but sometimes 'tis a long while invisible. Strain of the *shoulder*, probably; by some persons termed "shoulder shook?"

A. Never, from such a *cause*; nor unless the

horse has sustained an accidental *blow* there, or has been thrown down, or he has sustained a twisted tread upon uneven ground, which the *rider* must have noticed at the time of its happening; in all which cases the person in charge of the sufferer should be invited to declare the fact. Similar accidents happen behind, at the *stifle*, or the *whirl-bone*, but are seldom acknowledged by ordinary drivers, with whom they mostly occur, in driving carelessly through the crowded road, or upon entering the narrow stable-doors with which an ill-judged parsimony has unblest a certain description of proprietors.

Q. When a better description of horse falls lame under the like circumstances, we are no better off.

A. We try every art to find out the place affected; so, to make sure of the shoulder first, lift up the head of your patient high, compare the size of his two shoulders, let go his head abruptly, and he will drop it towards the side his pain lies, when the shoulder will be found swollen either towards the breast or near the withers, and he evinces pain upon its being rubbed down hard.

Q. With us, they rattle some corn in a sieve behind the horse, now on this side, now on that, and you shall discover whether he flinches when turning his neck this way or that, as he will do if the ailment be in his shoulder.

A. According to the extent of the injury and the state of the patient's bodily health will be the amount of inflammation and swelling, although

both are absent on some occasions, and no other symptom remain in common but *lameness*, and the flinching you speak of: when heat and swelling supervene, rub the part well with *camphoretted spirits*, No. 2; when no swelling is perceivable, employ the *cold lotion*, with the roller-binding. [See APPENDIX for these.]

Q. Well, and suppose the lame horse does not flinch, nor drag his toe on the ground, nor any of those other symptoms you speak of?

A. Then does the lameness lie in the *foot*, or in the *leg*, just above it, but seldom in the latter when the lameness is before—except, indeed, with *blood horses* in training—which are very liable to "fall lame," as the people about them say, *unaccountably*.

Q. But can you tell me how this *falling lame* occurs so often with racers in training, notwithstanding the indescribable care that is taken to bring forward this description of horse in the very best possible state to the post? The expense——

A. Too much anxiety often defeats its own purpose: the very best things may be overdone; so is hand-rubbing, carried to an extreme, upon the legs of those horses until they become susceptible of the least injury, as may be inferred from the lowering of the pastern bone, its inclination downwards increasing as this operation is more assiduously performed. This appears to me to be one of those things in stable management which, being good and beneficial up to a certain point, when pushed

to excess becomes prejudicial. I have always maintained this doctrine, and acted upon it. The part having lost its defence in consequence of the muscle being absorbed by the friction—the bared sinews are exposed to blows—the which, however trivial, are felt in their degree; and as they occur (I believe) about the time of going to exercise, *i.e.* at *clothing*, putting up the boy in the stall, and partly *turning*, instead of backing quite out—the gallop renders a most insignificant touch matter of importance; for *the horse comes home lame.*

Q. We frequently notice that high-bred cattle, young ones in particular, are given to cross the fore-legs in turning; this is one of their habits, which is more observable when in training, and tells us plainly, *they should not be turned round* too sharp at any time. In the actual race, I have noticed several instances of *falling lame* while running, and of breaking down, that these occurred at, or soon after passing some turn in the land.

A. 'Twere better, if the accident could be discovered *before going out*, when a walk of two or three hours might probably restore the leg; but it is *the pace* that has brought the accident to maturity, which is only to be got over by comparative rest. [See *Camphoretted Spirits*, in APPENDIX.]

Q. Ah! *Rest* is incompatible with training; it puts on *flesh.*

A. Which must then be got rid of by physic; purging-balls and sweating-powders must take place

of sweating over the hills and downs, and the natural evacuations. We apply the *cold lotion* or camphoretted spirits, according to the nature of the accident, and restore the limb to its former state by those means; but much valuable time is thus lost in the process, whilst we still look upon the leg with suspicion, and the proprietor acts under a doubt with his engagements.

Q. What further happens, even in the slightest cases, but that every day the work is suspended, the animal loses temper, much to the disadvantage of his form of going.

A. He becomes choleric in consequence of his blood thickening, and must be bled, to the amount of two quarts at the least. Indeed, if the accident has been greater than what I have hitherto contemplated, the cure would be accelerated by bleeding in the first instance, to the amount of four quarts, or rather more, if the subject be one of the strong, hearty kind, and consequently full of blood, and of irritable disposition. When lameness is inflicted on such an one, bleeding is no longer optional, nor should its quantity be trifling.

Q. Walking exercise (gently does it) on a paddock completes the cure; I have worked at it myself.

A. And I, too, ofttimes. Whilst dressing, the last-mentioned description of horses will strike a foot against its corresponding leg, unless you take the precaution to guard against this accident by putting on the boots.

Q. I also remember a fine horse being kicked by a lad, in the act of dressing him, as he said, "in his own defence," the horse having rammed him against the stall in its agony at the curry-comb.

A. This is an offence seldom happening in the present day; but whoever put that barbarous instrument into the poor fellow's hands was the primary offender, though only to use it for cleansing the brush, which is itself too generally coarse and unfit to apply to the coat of a thorough-bred horse.

Q. They make brushes of *whalebone hair* now-a-day, which should be rejected for thin-skinned horses, as a few hairs always retain the original hardness of the whalebone.

Hunters likewise fall lame through the same causes; and also by hard work over an uneven country; as they do by leaping, without exactly clearing the object they go at.

A. Then it is that a little strain, or rather *sprain*, of the back sinews and ligaments, which, although they be *large* in the hunter, contract lameness after a hard day's work is over, when the whole of the shank-bone loses its shape, and becomes round, large, and hot. This more certainly happens, if the horse is neglected, "left behind," perhaps, at some stray farm-house, near where he may have knocked up, and no opportunity offers of bandaging the legs, as ought to be done after every day's sport—provided there has been *sport*.

Q. At our stables, we previously bathe the fetlocks with warm water, and the knees too, giving

the flannels a twist round each joint, and supplying every one with three or four turns of the water, a little warmer each time, but no *lotion* or *embrocation*.

A. Of course, you take care to wipe quite dry, and that *before* the application is suffered to cool. You will find that horses with legs too fleshy have the most tendency to contract inflammation of the parts, as may be easily felt on grasping the leg before applying the *water*, which also dries up sooner the more heat you may find on either foot respectively, as it also is an indication of that heat, if not otherwise noticed by the touch.

Q. If the hardness remains, whether of the bone or its coverings, next day, we wash the leg in salt water, in the same manner, after walking out the horse, and give him the same exercise immediately after the cold bathing.*

Descending to the foot;—have you not observed that the majority of horses leave the shoeing smith with a different gait from the one with which they entered *his shop*, for tis ill advised to shoe the best description of horses in sight of their own stable.

* The whole subject of *strains* has received enlarged notice elsewhere. "*Veterinary Surgeon*," page 462. A deposite of *lymph* underneath the skin is the consequence of *a blow*, the which forms the groundwork of disease, either immediate or remote; whilst the *strain* causes exhaustion of the same means of lubricating the tendons, and they become arid and lose their flexibility. Warm bathing, however, corrects the tendency to either extreme, and walking exercise completes the cure.

A. It is so. Better lead such in company of a pad-horse or hackney, along the stable front, to a shed or shop at the further end; where, let us suppose in fairness, he is shod in the best manner; yet, if the smith pare the sole in large slivers, though altogether no more than is needful and proper, the horse will go away in a crippling gait; a measure that is ill-advised, even as regards the cart-horse. Then, if the work of either description of horse be carried on to its utmost powers, the *lameness* increases, or goes and returns, until it fixes itself somewhere, and the disorder receives in due time one or other of those pretty sounding *names* which tickle the ears, but which I am assured from good authority have no foundation in fact, in reason, or in analogy.*

Q. Here they are, two of them—" navicular diseases," " strain of the coffin joint"—both those bones lie in the internal of the hoof.

A. So nobody can *know* when either the one or the other afflicts the animal, until after death.

* No one has yet shown, upon paper, what symptoms of disorder have subsequently turned out to be " affections of the *navicula*," or shuttle-bone. In another place, I have given a minute and, I hope, a clear anatomical description of the internal parts of the horse's foot; whereby we arrive at the certainty that no one can pronounce the drying up of the juices by heat or disease, a " navicular disorder," nor " disease of the lamina;" for these juices pervade the whole internal foot, interposing between the coffin-bone and *the wall*, where the lamina is situated; but previously the juice lubricates the navicula, and ascends to the coronet.—Vide Hinds' " Veterinary Surgeon," page 431.

Q. Much too late to do any good, I think. Pray, who gave them those names?

A. I *profess* not to know; but apprehend that they mean nothing else but *the founder*, when the horse, from his manner of walking, is also termed *groggy*. Many other causes of lameness are much better defined; *contraction* for example.

Q. Not allowed, I understand; one of the mistaken notions.

A. No; not wholly so. The advocates for the doctrine of *contracted hoof* asked for too much credence; their opponents deny that contraction causes lameness, because they could adduce marked cases of contraction without any lameness.

Q. Were they not then satisfied with this closer?

A. I was not for one, nor ought you. The dispute is thus solved:—when contraction comes on *slowly*, as it does with ordinary draught cattle, no lameness afflicts them, even though the pommiced sole be as convex as a bowl; but when the higher orders, as saddle-horses, stagers, hunters, experience contraction, it makes rapid strides in proportion to the quick pace at which the sufferers may be ridden or driven. Comparative rest alleviates the pain and heat, and the contracted hoofs that can be so laid up awhile, never become absolutely lame.

Q. Our modern stage-proprietors seem to have found this out by experience, for many of their *sets* consist of five horses, leaving one idle at the tail of the journey; or, at least, they keep a spare wheeler and leader to three or four sets.

A. The consequence is that we scarcely ever see a lame horse in a stage-coach now as formerly. But the *sudden* contraction, arising from a harsh, compulsory, unrelenting, unrelaxing, performance of its duties, is that which brings on lameness of both fore-feet, if it does not extend to the whole set, and the horse is rendered useless awhile, or ruined for the remainder of its days.

Q. This, then, is lameness from contraction; the former is contraction without the *immediate* production of lameness.

A. But still very liable to become so, if the horse so affected be pushed in his work, in *pace* or *length*, beyond his usual performance. Both degrees are affected alike; that is to say, the hoof contracts upon its *contents*, the coffin and shuttle-bones, and the vessels around them that secrete the horny material; when the contraction is *gradual* these *contents* adapt themselves to the new state of things by degrees, the secretion then going on with increased feverish activity, throws out horn superabundantly, and what the wall is deficient in *shape* it acquires in *substance*. Most horsemen like a *strong foot*, and this circumstance blinds them as to *defective shape*, for such, most undoubtedly it is, when the heels become low and the front of the hoof sinks or becomes more and more inclined.

Q. But many thousand horses—carriage and curricle—have those flat feet you allude to, yet never fall lame of a sudden.

A. Don't say *never*, for when they do, they no longer go out *as such*; they are allowed *rest* and recover; rest, physic, and walking exercise is the panacea for all recent, *unaccountable* lameness, whether of leg or foot. The feet of this description are soft; they are mostly high-goers, and instead of *contracting* (growing less) in the manner that your hard feet do, these spread out, expand, flatten; by which species of distortion unnatural heat is engendered, as in the preceding instance, much horn is furnished to the wall so as to give it the appearance of *strength*, and, perhaps, the reality. But then *the heels* contract, the frog loses its shape, and requires frequent paring off of its rotten surface, as does the sole, every ten days or a fortnight, when in full work on hard roads.

Q. These large-footed horses seem inspirited by every fresh shoeing, as if conscious of the benefits derived from the butteris and drawing knife; but their soles are seldom flakey.

A. *Never*, I should think, owing to the softness of the hoof, which seems to direct that such soles should be used tenderly, whilst the rotten frog demands reduction and the bars require opening freely.

Q. We have been all along thinking of the foreleg only.

A. With its foot.

Lameness frequently depends upon some internal disorder—that is to say, is caused by it, and may be removed by restoring the body to good order.

Unfavourable growth of the *lungs*, for instance, affect the fore-*feet*; of the liver, kidneys, stomach, the hind-*legs*.

Q. Of both these *internal parts* let us talk more hereafter. [*Conversations* xii. and xv.] At present the legs, the feet, demand our care. Is it not strange matter for reflection, that so many disorders, all well marked and distinct, should be inherent to the fore-feet of *our horses*, which are wholly unknown *behind*, whilst the only two that afflict the hind-feet very seldom appear on the fore-feet? *Ringbone* and *grease* are the pair of posterior diseases I now advert to.

A. "Entirely owing to *the act of progression!*" I concluded lately, after contemplating over the same subject, and taking into account the balance which the fore limb and the hind one strike in reckoning up the greater number of disorders that belong to the hind-*leg*, which are unknown to the fore-*leg*. Leaving out of our estimate *inflicted disorders*, or accidents, (as broken knee, cutting, &c.) the *fore-leg*, I believe, is subject to but two disorders, the *hind-leg* to a dozen.

Q. All which must be attributed to the superior severity of the beating or battering the fore-foot undergoes in its contact with the hard ground, from which the hind-foot is comparatively free.

A. The office of this latter limb, being evidently to propel the body along, that of the fore-limb to sustain the weight, which falls the more heavily as

the pace is accelerated, and the *concussion* becomes greater the faster the animal goes.

Q. 'Tis *the pace* that finds them out; but *concussion* as a word descriptive of this kind of infliction on the fore-feet has been sneered at by the controversialists.

A. Let them; 'tis, nevertheless, a just term, and the thing is as much a disorder as a *wound*, or other infliction. This new custom of ridiculing *the Professor* may be reckoned among the excesses of the times; though he may not be always right, none ought to charge another wrongfully, even with the venial offence of surpassing in wisdom.

Q. We have settled *our question*, however, that accelerated speed causes increased concussion of the *fore-feet* against the stones; hence the disorders that attach to the *fore-feet*; the hind ones, being simply employed in propulsion, suffer less concussion—hence less disease of the feet behind.

A. So far you fill up my idea justly; but *our question* will only be "settled" by bringing into estimate how much the rapid *act of progression* puts a tax upon the *lungs* to the utmost of their powers to discharge; nay, *beyond* their power, at a quick pace and extra lengths, whereby an inflammatory disorder is engendered there, at the moment a correspondent one is inflicted upon the fore-feet, and a fellow-feeling or companionship is kept up between them, which is renewed, *pro* and *con*, upon every future occasion of inflammation,

of broken wind, of founder, of cough, or extra hard work. Hence the confusion of people who speak of *foot-founder* and *chest-founder*, mixedly, as begetting each other: nor were they altogether wrong, as we shall see upon further examination.

Q. What a source of ingenious inquiry have you here opened up! We must postpone closer investigation of the premises to a future day. [*Conversations* xii. and xiv.] Meantime, let us turn to "the posterior limb," as the hospitallers of St. Pancras would say.

A. *Lameness of the hind-leg* is almost invariably charged upon *strain of the stifle*, of the hip-joint, or *whirl-bone*; but generally with as little justice as we just now discoursed regarding the shoulder-strain. When either of those large projecting bones are anywise affected, we may safely ascribe it to accident, inflicted upon the animal at going into the narrow stable-door-way, or by the driver's running against posts, walls, and carriages in the streets. When the seat of the disorder is ascertained, fomentations of bran-poultices, of marsh-mallows, and of the camphoretted spirits [set down in the APPENDIX,] may be applied with good effect; but if the stifle *swell* in consequence of the injury inflicted, it will also feel tender, i. e. the animal will shrink from the touch; you must then bleed and purge to an amount commensurate with the accident, the tenderness and the actual state of the animal's bodily health, his fleshiness, dungings, &c.

Q. Very similar to the treatment for shoulder-

lameness we were talking of this morning, except as to bleeding the patient.

A. In like manner, if you do not discover the cause of lameness to reside in the upper part of the limb, 'tis occasioned by *bone-spavin*, by *ring-bone*, or some other of the many disorders of *the leg*; for, I presume, you will have ascertained beforehand that your horse is not afflicted with that beggarly disorder of a filthy stable, a *running frush*, or its equally disgusting, but more extended, successor, *canker*, which are, in fact, but one disease.

Canker and Thrush.—By the way, I may observe, are brought on by want of pressure on the frog, and attack the better description of horses occasionally; but these are invariably of the heavy, fleshy variety, whence I am led to conclude that this is *one* of the disorders that is engendered *in the system*, probably at the liver or kidneys. Our best London dray and town-cart horses, for example, fall martyrs to this disorder, on account of the high calkings the smiths give to their shoes, whilst those with lower heels, and in poorer *keep*, escape with impunity. In proof that it is *want of pressure* on the frog which *brings on this disease*, I may adduce the fact, that procuring pressure to the parts is the chief means of cure, which never fails to relieve.

Q. *Pressure of the frog* is thus proven beneficial, its absence harmful, to the well being of the sole, if not of the whole foot.

A. It promotes secretion of the horny juices; and although these might and do *go on* secreting,

whilst the frog is suspended from the ground, yet no one will pretend to say that secretion proceeds healthfully, when they see such an infernal product of the smith's labours as a *running frush*, as we now call it. Turn the question how we may, *frog pressure* has *an effect*, and that effect is desirable, notwithstanding the opposition may adduce a hundred instances of horses going well without it.

Q. The dispute seems settled on its proper bases: one party asked for too much belief, the other denied them any; both were wrong in the *extent* of their views.

You were speaking just now (p. 25) of the great heat of his body affecting the horse's feet, causing *brittle hoof*, and contraction; pray how is this evil brought about; and this leads me to ask, what is the remedy?

A. You are perfectly correct there, in asking about *the* remedy, there being but one, and that one comprised in a single sentence, *namely*,—Reduce the heat, and that of the body first;* supply

* The *heat* here spoken of would be better understood by many as *stimulation*, of which the horse possesses a good deal naturally, and much more is cast upon him by forced exercise, by the *stimulation* of oats, beans, malt, *cordials*, instead of the natural green food; besides the constant irritation upon his memory (*mind?*) of visible objects of desire or aversion, which at the highest pitch we term fretfulness, and the disorder to which it gives rise is *the fret*, a precursor of umbilical inflammation. Thus, the pain which succeeds the pleasurable sensations derived from the use of stimulants, is spasm; and as the first acted primarily on the bowels, so do these sustain the convulsive contraction we

the moisture which your arts have denied him: work less, or give full rest.

*** This is the *principle* upon which the cure of all diseases, of whatsoever kind, must be undertaken, if you mean to succeed, viz. "Take away the cause and the effect ceases;" unless, indeed, *the cause* has been neglected so long, or persevered in so ruinously, or the remedy so ignorantly applied, that part of the effect of either error becomes permanent, and then acquires a different name—(demanding a different treatment) besides the indiscriminate ones of mere "lameness," for example, or "out of condition," or, "touched in the lungs"—neither of which means any thing that we can apply a remedy to with precision.

Q. Thank ye, my good friend. Must I, then, cool his feet and legs after a hard run, by walking my horse into cold water, or should I stop his foot with cow-dung and soft clay, or any of the other cold things so strongly recommended?

A. By no means; at least, not abruptly, whilst he is yet reeking hot, nor keep him standing in the water, least of all in winter; for such practices are more likely to bring on and confirm lasting diseases of the feet, if they do not cost many a horse his life at once. Sudden death from inflammation of the blood (and

call spasmodic colic, gripes, or fret; which, by continuance, reproduces inflammation of the parts we previously stimulated, and its adjacencies. *Sedatives* allay pain; stimulant medicines restore the tone; and both prevent that re-action which is so dangerous in all such cases.

its vessels), by its determining to the brain, being most imminent, though similar attacks on the *bowels* and the *lungs*, after such chills, are of more common recurrence, and in hot weather more than in cold. We will talk more of those internal parts hereafter.

Q. But you yourself practise *stopping* on brittle hoof, I see; pray do you ever use horse-dung for that purpose?

A. The last thing before *bedding up*, I do; but horse-dung is of too hot a nature, even though you allay its heating qualities with strong *solution of nitre*, as recommended. If ever horse-dung be preferable for stopping, it would be after hard work *in winter*, when the extremities have been suffered to cool below natural heat, as happens to soft hoofs, ere they get flattened: to ascertain which fact, you feel the pulse at the pastern, and by grasping the foot with both hands, compare the general warmth thereof with the quickness of the pulse—or rather say *slowness*, on the present occasion. Although most of those applications, as well as the *sponge boot*, are undoubtedly useful in the sequel of attacks on the feet, yet are they no less improper whilst the horse is yet jaded, the feet feverish, and susceptible of every variation of temperature. Let the pulse subside and the sweating cease, ere you wet the feet.

Q. Am I to understand that neither extreme is good? For the old practice of applying hot remedies to the feet has been long exploded, I hear, as being detrimental to the growth of horn, and causing the hoof to assume a wry shape: even the admixture of

vinegar must corrode and destroy, whilst its cooling properties are fully acknowledged.

A. Yes, most assuredly; hot tar, hot oils, and all heating *things*, are proveably destructive of animal substances, dead or alive, and therefore to be avoided in every shape; unless it be *a styptic* applied to a prick or wound, and then instead of all other prescription of *the oils*, &c. of which we once heard so much and so stupidly said, a drop of brandy, or Dutch drops, is as good as any for stanching the blood. On the other hand, colds, fevers, and inflammatory complaints of several kinds, are caused by such sudden checks as those just alluded to, being given to the circulation of the blood, and is then termed "chill." More particularly when this takes place at the time the blood flows most determinedly towards the feet, as it does a long time after hard work, or a hard run, it would be evidently dangerous to walk your horse into cold water, to apply chilling mixtures to his feet, or do any other act that is likely so to produce a revulsion of the animal's system; whereby the blood is compelled to rush back to its sources (the heart and the liver), or to the head, the skin, or wherever it may expend its malignant force the readiest; the weaker part of the system being most liable to receive the severest shock, and the disease is then very significantly said to *fix itself* there. Tender horses suffer most in the "*lungs*," at the *windpipe*, and its *lining*; irritable ones—those of them which feed heartily, craving for water, and fretful, suffer in the stomach and kid-

neys; whence the effect descends to their *hind legs*, whilst the *fore feet* of those tender ones are mainly affected on such occasions.

Q. If the same sort of chill were to attack the carcase, the effect there would be the same, I presume?

A. Very nearly; but does not happen so often as that by the feet, which necessarily suffer more hardships than any part of the frame. In fine, no other treatment seems necessary on such occasions, than permitting the jaded beast to cool *gradually*, sheltered from a current of air, after scraping off the sweat, loosening the saddle, harness, &c. Walking does all that is necessary in this state of his body, and bringing him to his food restores his spirits; with these, a just circulation of the blood ensues, with renovation of strength: then only it is that washing the feet and stopping the heels can be resorted to with advantage, as the system of bodily health is now such as to absorb or take up any humours that his former languid dejection may have permitted to subside there.*

* So true are these observations, that we may notice a horse which at any time has sustained a bodily disorder, always proves it by the ailing state of his feet and legs; so will the inordinate use of *cordials* produce in time *brittle hoof*, contracted heels, and one or other of the train of diseases arising from an *imperfect* secretion of horn, in which the heat prevails over the necessary moisture; hereupon we endeavour to amend the defect by applying artificial exterior moisture, by means of the sponge-boot, stopping, &c. In like manner, but inversely, do accidents at the feet affect the carcase, as the stomach and lungs, the liver and kidneys

Q. Aye, aye; the want of sufficient vigour failing to keep up the due circulation of the blood, the animal functions droop. Good. Thus have I found the work has been so severe at times, that the horse can neither walk or feed: and at other times so excessive that bleeding the bars was found insufficient to make him take his corn—what then?

A. In that case, bleed him in the neck-vein at once, a quart or three pints, from a large orifice; for, when he is in that state, you will find his pulse quickened and full, though occasionally indistinct, as if its power of flowing were obstructed at intervals. The black state of the blood at the bottom of the receiving vessel will tell how necessary the operation has been:* give a mild purgative afterwards (see *Aloes*, § 10, and *Physic*, § 3, in APPENDIX), and plenty of water-gruel or bran-mashes next day. Give the cordial ball No. 1, *in the first*

falling into disease by a kind of sympathy with these, or communicating it to the two first, on suffering greatly from anguish of the feet. The treatment for this apparently complex attack is, however, very simple; the disorder at the feet being reduced (according to its nature), restoring the stomach to its proper *tone* usually effects all the rest. [Consult for this purpose *Tonics*, in the APPENDIX.]

* The muscle or fleshy part of all over-driven or hunted animals approach towards mortification by the finer blood vessels being driven full, and detaining their contents until putrescence comes on; at the head atrophy and sudden death ensues. Meat of the chased stag is purple, so is that of hunted hares: if *shot dead* it is red; but if after being stricken the fallow deer runs (as he is wont) to a ditch and lingers, the meat is paler than usual.

instance, unless it be an old horse which has been inured to cordials, when No. 2 will be found not over strong.

Q. "A stitch in time saves nine," according to the old adage.

A. But neglect your horse awhile under those circumstances, and low feverish symptoms ensue, as certain as does the more acute attack, whose origin I have just touched upon [in the last page]; in this event it consists of increasing excitement of the whole system, in the preceding the animal droops, and the disorder falls into his feet; for, you will remember, there is always a determination of the blood to the feet going on, which tendency is further accelerated by the great exertions the animal is compelled to take usually over hot roads. Unusual heat of the feet is then prevalent, and is kept up after that of the body has resumed the natural, which may well be considered, "fever of the feet," and as the harbinger of *a more defined disorder,* with twenty *names,* but having only one origin,—viz. drying up of the moisture that should have supplied new healthy horn, after lubricating the *internal parts* of the foot.

Q. Seeing the benefit of promptness, better carry a *fleam* about one, then? or a *lancet,* perhaps? I once saw a sporting doctor, in the north, pull out a lancet and bleed his hunter, and that of another gentleman, in the middle of a ploughed field, where they had knocked up after a severe chase; where-

upon both went away much recovered; and a cordial, which he carried in his pocket, did the rest. The lancet is the best instrument, is it not?

A. Not for every purpose, nor in every one's hands: *use* does a good deal, as in the case you mention; but 'tis an uncertain instrument, when large quantities of blood are required to be drawn off, not making an orifice sufficiently large, besides being liable to abuse in the hands of ignorant persons. On those occasions, when bleeding in the mouth, the feet, or at the temple, may be deemed requisite, however, it may be employed with reason.

Q. Would you bleed at the foot for an undefined lameness?

A. Not always. If fever of the part continued, whilst that of the body was nearly natural, I should think the cause defined enough for my purpose, and be inclined to bleed at the pastern, more especially if I had already bled at the neck-vein, and the lameness were no better for it. It is now perfectly local, and has been occasioned by the rider or driver constantly making this the *leading foot* at setting out.

Q. But *stopping*, if persisted in, effects amendment.

A. If you also change the leading foot in going, the cure may be completed; 'tis long *continued work* and the infliction of the beating on the injured foot that fixes the lameness.

Q. Ill-built horses, those with the legs badly set on, have always a leading foot; what is to be done at them?

A. Reject them *in toto.*

Q. Few of our stable people are adroit at stopping heels, so as it may remain secure during the night.

A. Nor at bandaging either, for fistula, wounds, quittor, &c. Splents of wood, resembling matches, inserted under the inner rim of the shoe, retains the mass tolerably well, or a tin slider, entering at the heel. Then there is *the boot*, and a patent sponge-boot, forsooth, which any of our harness-makers can contrive and adjust to circumstances, according to order; these are well adapted for retaining moisture or any application deemed necessary to the foot, the only objection I can see being in cases of fever of the foot, when we so much desire coolness for the patient, which the boot counteracts after being on the foot three or four hours.

Q. For which purpose some persons wash frequently the stable-floor, or contrive to give the horse a standing on sodden or clayey ground, when they cannot turn it out to the homestead, unpaved yard, or loose in a linhay or shed.

A. For working horses that are wanted in turn, either is a good substitute, but nothing like so efficacious as sending such ailing horses to field by night in summer, and during the brightest hours of

the day in the colder seasons: with these we find no lasting complaints of the feet, besides accidents. All hunters are too tenderly kept; to my mind none but hearty, robust horses, half-bred and three-quarter bred, should take the field after fox or stag.

Q. The advantages of turning out to such cattle is inestimable.

A. *Lungs* and *hoofs* admirable! Though coats roughish and legs a little fleshy to be sure, requiring occasional physic, and much manual labour: it has been practised on a large scale with regard to hunters, also, in mild countries. At *Chumleigh*, as fine a stud as ever followed fox, lived in the open air during the hunting season; what their coats suffered *in appearance* was fully compensated by the super-excellent manner in which they finished the day's sport. No piping, nor any distress that a slight cordial or warm ale could not banish.

Q. They could never be *in condition*, according to the present accepted phrase, with a sleek and fat exterior. Gentlemen, now-a-day, require something handsome *to look at*; you know as well as I do, that a queer-looking set-out would excite jeers in a crack hunt, any where about *Melton* for example.

A. Gentlemen must follow their own fancies, but the constitution of a horse 'tis impossible to control by fashion: every one is aware, that 'tis very seldom the sleekest or most spirited horse at the

covert-side in the morning, returns in the best state to the stable at night; never, if he owe his apparent *condition* to cordials, and woollen clothing in a hot stable.

Q. Better to reserve these until the return home, you say. Pray did they cordial the hunters at Chumleigh any?

A. Only on emergencies—they would be too tender for the open air else. I speak of 1824–5. No coughs, no foot fever, no affections of the stomach, always ready for their corn, nor any blear eyes as some might expect; nor indeed any days of rest, they took as much exercise on blank days as they chose and went the better for it. "Grass!" I do not think they took any. What made you think so? You dispute like a *Nimrod.*

Q. You agreed with me, that he was right in keeping up his cattle *always in condition.*

A. Always fit for *sale,* you mean; and herein lies the germ of the dispute between that *periodical* writer and his opponents, who maintain the lasting benefits of soiling the hunter, unless like him they can attend throughout the summer to a scrupulous regulation of the animal's digestive organs, which must otherwise suffer by the constant stimulation *dry food* keeps up. Look at His Majesty's hunters, for example, which are annually sent to the neighbourhood of Maidenhead to disport in the natural soil; then look at them when they return to Winkfield again! The thing speaks for itself. Give me

good feet and good wind, the back-sinews large and well-covered, before all the fine coats and full-fed carcases in the world; health and vigour and lastingness to the end of the chase are sure to follow a summer run at grass, if well conducted, and the feet looked after, so that little accidents be repaired at once. Such animals return home, laughing as 'twere, at the fatigues of the day. Then turn up their heels and thumb their soles; no flinching there.

Q. Very fond of *thumbing*, I perceive.

A. To be sure I am: at coming home and *going out*, and whenever danger is to be apprehended, that is my habit. You may not have observed, that after stopping his heels a few days, the sole will feel soft, or the application would fail in its effect; but clean it out, give your horse a few hours standing, and the hardness returns naturally. Observe always to renew the stopping *afresh* at each removal; and also that, although *coolness* be beneficial to the *frog* and *bars*, yet constant *wet is not so*, therefore, previous to stopping let these parts be payed with *tar*, to defend them from soaking too much: whenever the sole bends to the pressure, discontinue the stopping.

Q. Of which fresh cow-dung is the basis, with an admixture of soft clay—?

A. With the addition of a strong solution of *nitre*, when greater coolness is required; but this is not necessary for the sound foot or feet,

nor do these want renewal so often as the lame one.

Q. What! Stop three sound feet when one only is affected?

A. Yes; after much fatigue, and the corresponding foot in every case. For this reason—the lameness owing its origin to the previous general ill state of the body, might as readily attack one foot as another, if the same immediate cause existed; but as the lameness we have now under consideration is not denoted by any other symptom except greater heat, has been brought on simply by the horse *beating* with it, or making it the *leading foot* in going, we should probably, by stopping one foot only perform a cure as regards that one, leaving the others open to the same influence of his bodily ill-health, to say nothing of the sympathy that exists through the medium of the *lungs* between one foot and another *before*, as it does in a less degree *behind*, through the medium of the kidneys and stomach. I can account for it in no other way.

Q. Nor I, I am sure. The soles of each foot would differ in the *degree of hardness*, if treated differently, that is evident.

A. And then by affording more moisture internally to one foot only we might bring on another kind of lameness, akin to *founder*. So we should also a disposition to incur others, if the stopping be continued long after the cure has been effected, as would be known by the pulse showing reduction

of heat for a while. So much for counteracting incipient lameness and its train of evils.

Q. Concerning the more marked and distinct disorders of the feet arising from the same cause we will say a few words hereafter. [*Conversation* xii.]

A. Next to these, the whole class of *strains* are most frequently recurring; some being original disorders of misconstruction of the limbs, or of these being badly placed on the body, but the far greater number is attributable to the *crime* (let me say) of *mounting* too early, and the vanity of running horses too young.

Q. That is a point in horse economy beyond our control.

A. Reject all such as are so misconstructed, or worked too early in life, ye who would make a living by the animal, or receive pleasure by its exertions.

Q. Good again.

A. Bad enough, I should think for those who get hold of such *things*.

CONVERSATION III.

Condition: Cordials, use and abuse of; Effects; Recovery from severe Work; natural Cordials.

Q. Your plan of reducing the quantity of blood when the animal is *knocked up* by his exertion, seems to me at total variance with the general practice of giving cordials on such occasions, and your own admissions.

A. Not at all irreconcilable are those means of restoration: bleeding has the effect of relieving the rigidity of the blood vessels, and with it that of the whole frame, whereby the blood finds free circulation whilst the cordials stimulate to the same end—namely, *acceleration of the pulse.*

Q. The adoption of the latter means of restoring the animal powers in the first instance, appears to be putting the cart before the horse; though many persons have recourse to stimulants upon every little occasion, and some sportsmen carry with them cordial balls for the purpose, administering these in *ale, wine, &c.* [APPENDIX, *Cordials.*]

A. So they may, very properly, upon small occasions of *knock up*, and these only, provided the pulse beat *regularly*, though low; but not when quick and slow alternately, as if the animal already laboured under too much excitement. Another

means of judging when stimulants would not be improper, is found in the circumstance of the jaded horse having been recently bled and purged, when we may reasonably conclude that his system is not then overcharged with *ill-humours*, and therefore that exhausted nature may now receive a fillip advantageously: in this case also his pulse will be *regular*, however *low*. Under such circumstances I have known a cordial remove lameness that had been brought on by excessively severe work, and the consequent want of vigour in the circulation of the blood; but your hunters, to which my attention has been mostly directed for this half-hour past, are bled too frequently, without other cause assigned than *custom*, or fashion—this is one of the mistakes of superfine management.

Q. This practice of bleeding at stated intervals, you have shewn is—

A. A mere *job*, you know, of certain parties; so is the boasted "regular physicking" of hunters; and then the heavy doses usually administered is really destructive of the passages: aloes lose their efficacy, and do harm by frequent use.

Q. Is there no mode of alleviating the ill-effects of this very prevalent error? Horses in quick work and on high feed require physic, you know?

A. Less might serve. We will recur to the subject of "physicking" at some future day. [*Conversation* viii. and see APPENDIX.]

Q. But the bare mention brings us back to *the pulse* again: when this "index" is low, and the

horse dejected, and heavy in hand, should we always give cordials, whether or no?

A. Perhaps I might say *yes* with propriety, but you, I fear, would be apt to carry the admission to extremes, and give them upon trifling occasions. But, remember always that cordials given to horses operate like drams taken by mankind; the short-lived vigour thus infused causes the spirits subsequently to flag below par, until the fresh dram and another cordial bring the *taker* up to his former pitch, and both ultimately become as necessary as food, especially in advanced age.

Q. Thorough dram-drinkers are not long-lived.

A. So do cordials wear out the horse. For the tendency of all stimulants is to destroy the digestive powers, on which all the other functions of life mainly depend; so that the desire for food daily lessens, the stomach loses its proper tone, and what the horse does eat is taken capriciously; that is to say, either without a relish, or voraciously swallowed, without due mastication.

Q. What a train of *ills* is hereby engendered!

A. Flatulency, cholic, affections of the *wind*, worms, inflammation of the intestines, staggers.

Q. I conclude that the *habit* of giving cordials is a bad one: at intervals, then?

A. Whenever sufficient occasion demands it, no better restorative can be employed than *cordials*; wantonly used, nothing is so replete with mischief. The drunkard's "short life and a merry one" is strictly applicable; the *cordials* used by him are

well said to "wear out the constitution of a horse," as if the speaker had our present topic in view.

Q. We might safely administer them at the lowest pitch at which they would do good; never give more or stronger than will just restore the animal to his wonted vigour, nor that oftener than is absolutely necessary.

A. Then return to the usual mode of feeding gradually, whenever the cordial-giving has been abused.

Q. Step by step, eh?

A. Good oats, barley, beans—all broken; a little malt, as a mash; these are steps by which we resume the healthy aliment after the animal has been pampered too much with cordials. Those substances have themselves the effect of cordials in various degrees—*oats* being the lowest, though giving to the horse which masticates them well an invigoration that is truly surprising; *sodden barley* being next in order, and in this state adapted for agricultural horses; *beans* are the strongest; and all the class, when given to excess, predisposing the animal to contract inflammatory disorders or fever of the whole system, which ultimately fall into the feet, if the complaint do not commence there; of these latter, *grease* is the most speedy in its appearance; if the other, or immediate cause, a chill, also conduce thereto.

Q. Unless counteracted by physic, as the urine-balls,—

A. Or green food: a *turn-out* is the best physic, provided we can spare our faithful servant to take a holiday, and ruralise a little "among the green-fields."

CONVERSATION IV.

Condition: soiling, necessity of; Advantages and Disadvantages; physicking; turning-out; the Humours; in-door Mistreatment. Of Green Food. Clothing.

Q. What an immense variety of opinion has been recently broached on this subject alone, that is described in one word, and that one misunderstood as to what is meant by it—"condition." Each party seems to have the best of the argument, for both refer to facts and to experience for their assertions; but how vast the dissonance that exists.

A. Yet is no contrariety sooner reconciled, if we place ourselves in a situation for forming a right judgement of the point in dispute. If horses remained in a state of nature, they would require *natural food* only, but they could not *thrive* during the inclement months for want of proper nourishment, and man provides for them dried provender and shelter, which improves their breed

in every other respect than *wind*; he likewise de mands their services to the utmost extent, an would keep them in a *condition* to perform thos services all the year round, by stable managemen He fails, however, in accomplishing this to th extent of his wishes.

Q. How he fails is worth knowing.

A. Dry food, as oats and hay, forms their mai support in-doors, keeps up their strength, and wit it the fullness of the juices; irregularity in th secretions, and a *thickening* or stagnation of th natural secretions we then call "the humours follow, whereby disease is engendered.

Q. Which man endeavours to amend by me dicine—

A. Instead of *preventing* by an assimilation o the natural mode of living with the forced or domes tic manner of *feeding*: an abundance of *hay*, fo instance, impedes the action of the lungs, if th horse is permitted to *stand to his hay* all hi leisure time, whilst *oats* given freely dispose th intestines to costiveness and consequent inflam mation; and, though both those evil consequence may be assuaged by frequent *waterings*, yet man has the arrogance to deny his animals this cheap and simple boon, because it affects their externa appearance forsooth.

Q. Close and crowded stabling augments th long catalogue of evils that surround the mere do mestic horse;—

A. By raising effluvia that becomes more an

more noxious as the food may be heating, gross, and tending to thicken the blood, and in time producing similar diseases to those enumerated by me at our last talk, [page 45.] As the heat and acrid stench augments itself, it soon affects the eyesight, inflames the lungs, and causes diseases of the skin, through excessive perspiration. Only see how a healthful horse will sometimes refuse to enter the door of an already crowded stable, as if prescient of the danger to be encountered within! 'Tis scandalous man does not receive lessons from his horse.

Q. Don't be warm about it; but let me hear your sentiments "on condition," as I have seen it titled up half a hundred times lately: is there any mystery in the process of training a horse into condition?

A. None whatever, *with me;* though some training grooms do make a mighty secret of their mode of treatment.

Q. Quit the controversy, then, with its subtle doubts and flat contradictions, and favour me with a few words of good common sense on the subject.

A. *Common sense* never entered into the consideration of what *condition* really meant, or it would have marked the great difference that exists between *bringing* a horse from grass into condition, and keeping him in that state after being once trained up to the right pitch for doing his work.

Q. A *hunter* cannot go through a hard day's

work with green food in him; I believe that i allowed.

A. No; nor a *dray-horse* either, unless it be casual mouthful, or an armful of vetches in th spring; certainly, not these or any others after *run at grass*, the better bred ones being most readil affected in the bowels by green food.

Q. In this case they give three doses of strong physic, and then—

A. In nine cases out of ten, horses from gras do not stand in need of any such physicking.

Q. Well, I'm sure, now you do *cap me* to a fright! Why, every body gives physic after *a run* at grass; *always*, I may say.

A. I don't care for that; though that practice is not now so generally followed as formerly. Has he not for months been taking the physic of nature, in the shape of succulent herbs and grasses of twenty different flavours, some of which are *positively purgative!* [See *Hay*, in APPENDIX.] And is he not thereby reduced in strength and flesh sufficiently without the farther aid of the doctor? Hearken a bit: after your horse has been *taken in* and put on full allowance of dry food, say 12lbs. of hay and three feeds of oats per day, stinted in his allowance of water, and his exercises scandalously neglected, to be sure his blood-vessels fill rapidly with the humours;* his perspiration is trivial and clammy

* *Humours.* Taking for granted that this word is vulgar and often wrongly applied, as represented by the doctors, ye

though incessant, his urine scanty and turbid, and even his dunging is impeded and hard—and all this within the first week—then, indeed, brisk physic becomes necessary; I might say indispensable.

Q. Oh, I thought you'd allow it right.

A. Not I, upon my word: your party give physic without observing any such *cause* for it as I have just now mentioned; they also give *three doses* when one might serve, and those so very strong as to shake the animal's constitution to the foundation. Never give physic or bleed without cause ascertained before-hand; but sure I am, that these *condition-balls* do not effect a benefit by "getting rid of the grass," which rids itself fast enough, but by carrying off the load of dung which begins to accumulate and to harden from the very first hour of his return to full feed; 'tis the oats that have effected this change in his body.

Q. But they always return from soil full of fogg, with thick legs and loose flesh all over, which the medicine sends away.

A. True, so far, and the reason I'll tell you presently; but with it there goes also a good deal of the animals' fine bracing strength they had acquired at

I think it an allowable one in the mouths of much higher educated persons than grooms pretend to be, if for *humours* they will understand *secretions* as meant to be implied; that is to say, a depravation of the usual secretions having occasioned these to disperse over the body, where they do not belong, and commit harm, instead of *coming* off in the usual manner, as they ought and do when health prevails, by the alvine, the cutaneous, and the urinary evacuations.

grass. Perhaps you don't know that 'tis a point gained in favour of longevity and sound stamina when we can do that without employing medicine which others only accomplish with it—if they *do* succeed.

Q. Really! Why, most people employ physic upon every occasion, and some upon no occasion at all, as if it were a fashion; what is the effect of all this *management?*

A. Effect! Why, of many kinds: it wears out the animals' organic functions, and prepares them to receive other disorders than those it cures, like the tinker and his holey kettle: the *stomach* is compelled to a feverish secretion of its gastric juices, the *bowels* exhaust their mucous lining, whereby the former lies open to *inflammation*, the latter to *molten grease* or to *scouring*; whilst the *liver*, although stimulated by some medicines, yet retains its *bile* as supernecessary by the action of others; and the *kidneys* being under the direct influence of the *stomach*, secrete *urine* by hasty instalments, until they cease to act at all.

Q. I perceive that no other function goes on regularly while the main canal is thrown into a rude commotion.

A. How difficult is it after *a fever*, for example, to bring back the bowels to their former regular state, in consequence of the strong physic employed to "kill the fever," as we say, having thrown them into disorder! So much are they then affected, that the old farriers in our grandfathers' time called it "excoriation of the guts;" and they were

not so far from the fact as they were from elegance of expression; for, upon noticing the intestines of several such dead subjects that were cut up at our kennel, I remarked that the bowels were quite of a livid red, as was the lower part of the stomach, also, when turned inside out.

Q. Ecod! that is the way to examine into the truth of the matter, in its recesses!

A. Who, then, in their senses would think of giving *three doses* of terrible strong physic, or *three* of any thing that art should devise, so soon after the animal's system had been similarly exhausted by *natural means*. Probably, as often happens, he may have had a *scouring* whilst he was out.

Q. In consequence of cold wet weather, or wet lying, perhaps?

A. That is a different case altogether, and seldom occurs, unless through carelessness in the first turning out; when spirited horses that enjoy their freedom overmuch usually contract slight affections of the lungs, by wallowing in damp spots to cool the overheated carcase: I contemplated only the consequence of taking too much grass for the weak bowels to bear of such harshly-physicked horses as I before alluded to.

Q. When the scouring so brought on has ceased, such animals get fat and puffy on grass.

A. This proves the beneficial effects of a *run at grass*, even for horses with tender insides: the jaded and relaxed bowels require the cooling regimen; an effort of nature to relieve itself of

something offensive takes place, and the old crudities, or undigested particles, being thus thrown off, improvement takes place immediately after.

Q. A process of nature that tells us plainly what estimable advantages would accrue from giving *green food* partially in the stable, or in a barn, to horses slowly recovering from illnesses that are ascribable to the harsh remedies which have been given to subdue *inflammatory* complaints. [*See Conversations* xi. xii.]

A. Just so. They ought rather to be emptied *previous to turning out*, as well as the more hardy horses, or at least their dunging should be brought into regular order, lest they acquire a cough; and at *taking up* from grass those tender ones which have thrived upon grass to fat and puffiness also require a *mild* purgative after a few days of dry feeding. [No. I of that class in the APPENDIX.] This constitutes the single case out of ten I had in my mind's eye when I allowed lately that that proportion might *stand in need of physic* upon coming from grass; whilst a single dose is now sufficient, and an alterative laxative is preferable to a purgative in every such case. Horses so afflicted with weak lungs and disordered bowels, which is known by the irregularity of their dungings and a disposition to habitual costiveness, should neither be put out to grass nor brought in abruptly, but both changes be effected by degrees. They also require light body clothing for the first few days of being out.

Q. Subtract from their allowance of corn pre-

vious to the turning out, and give small feeds upon first coming in, with a continuance of grass, cut and put in a prickle.

A. So, of all other horses, however hardy: neither bring them into the close stable at once, but confine them under a shed or outhouse, with at least one side closed by a pole only. Give a small quantity of green food in-doors, or new hay, and, in a few days, if there is a necessity for bringing them into good-looking condition out of hand, clothe them, but not too warm: a coat that resumes its smoothness *gradually* being worth twenty that are forced by diaphoretics; for these do not stand adversities of weather, nor long exposure at the covert-side, the horse being rendered very tender by the medicine.

Q. Still harping upon *the hunter*, I observe.

A. Or any other valuable horse that is worth the trouble, the hunter being the *medium:* thus, the *condition* that would be considered very fair for a *road horse* would not pass muster for a *hunter,* whilst *the racer* requires to be brought out in a much *finer* state than either. This latter is termed "training," because of the additional care we bestow in bringing up the animal to exert its best strength and powers of performing his courses, which he cannot accomplish unless the *lungs* have been trained to their full inflation by gradual means —weight, distance, and speed well regulated, of which more anon. As to the quantity and *kind* of clothing proper to be put on, the state of his

skin will best direct how these should be regulated, as this will be hotter in comparison with the pulse than was usual with the same animal before he was turned out, and for this good reason among others —*namely*, one effect of lying out being to close the pores of the skin by the constant refrigeration thereof by the air, and this ceasing altogether in the stable, the heat causes the skin to relax, the pores to open, the perspiration issues, and the loose redundant fat being thus reduced, he loses the fogg he had acquired at grass; hereupon the flowing of the perspiration freely, in conjunction with the dressing he receives from curry-comb and brush, from the hair-cloth and towelling, and hand-rubbing, brings him to that condition which enables the horse to perform his work satisfactorily. But here lies the point for your consideration: as the pores do not always open readily, with aged animals in particular, they must be induced to do so by the use of a mild *diaphoretic* [as No. 1, in APPENDIX] not rudely forced; in the mean time an excessive heat of the skin takes place that is truly disagreeable to the touch, whilst the pulse increases. At this period, carefully exclude a current of air, defer the use of woollen clothing, adopt the linen or hempen at *first*, and remember, now and for ever, to reject the use of *cotton cloth* for any purpose.

Q. Why is this? They make some that is very stout and of hard fabric in my country.

A. Not to its texture, but to its physical properties, is raised the objection to the use of *cotton*:

it is found detrimental to the growth of hair, and is consequently harmful to the appearance of the coat, besides having the effect of enervating the wearer.

Q. Many horses cannot bear *turning out* at all, whilst those large bodied hunters, which benefit most in constitutional strength by getting rid of their staleness, generally come up with a *cough;* and, although stronger, are ever found slower and heavy in hand after soiling.

A. Part of the duty of conditioning the hunter is to bring him to his paces again by daily strong work, opposed to others of his own class; by improving his stretch, and, with it, his wind, by increasing the lengths he has to go; all which is only to be accomplished by regulating his body and the hours of his exercise.

Q. Very few sweatings do for the hunter, I believe?

A. He need no extra clothing beyond a hood and quarter-piece, but if he be not sweated by strong exercise, and the loose fat kept down that always accrues after he is taken up from grass, he steps short, as if tied at the legs, and is disposed to to tire and shut up with any little extra work.

Q. It is essential to his future services that he should be brought out of those evil ways by the means you prescribe.

A. Gently does it best: the time is past when violence and coarseness would endeavour to manage the most docile of animals: if his instructors do

but once study his attributes aright, and govern him by dint of his appetite and his emulative disposition, they will find how wofully their laboured force has been hitherto thrown away.

Q. We shall have to return to the discussion of the various *appetites* of horses at some future opportunity, [*Conversation* ix.] as we have several times touched upon that topic without entering into it so fully as it deserves.

A. "*Deserves!*" why 'tis the all-in-all of animal management; there is nothing but his animal propensities that we can govern a horse by; we have nothing else to talk about but keeping these in the right trim.

CONVERSATION V.

General Health — Feeding and Exercise; indoor Treatment. Wind. Costiveness: Speed. Physic. Of blank Days, Rest. Distress. Watering: qualities. Stone. Temper, ravenous Horses and tender ones. Gross Food. Stretch and Length. Foreign Horses.

Q. Besides those persons who keep their horses up all the summer long, from principle, there are many who are precluded from sending them to grass by imperious circumstances; would you then

recommend bringing the green fodder to them indoors?

A. This, although doing something by way of alterative, will not effect all the benefits to be derived from a complete *turning out;* the feet, more than any other part of the horse, require the cooling so necessary for promoting the renovation of fresh healthy horn, and the bracing which is only to be attained by running bare foot on the green sod. Indeed, the whole frame of the horse is refreshed by it: all his sinews, ligaments, and joints, acquire the springiness of youth,—old age seems forgotten, and a wanton coltishness returns.

Q. The relaxation of the back sinews, which we call "low in the pastern," increases with horses that are kept up all summer long, for want of this bracing at the sinews, &c.

A. Let a substitute be found, then, as near as may be, in exercising the horse upon some undressed slip of land, and turn him loose or tether him while taking his green food, for a few hours daily, on a soft spot, patch, or straw-yard, which almost every establishment offers; if not, let him run loose about the stable, out-house, or linhay, and receive any other indulgence in his natural habits that is similarly calculated to renovate his powers. Give green food of various sorts—but very little oats, if any—as clover, grass, saintfoin, lucerne, vetches, &c. *fresh cut;* let them be served out alternately or together, until the body is relaxed, and he produces what may be considered a natural stool—better still if it amount to a complete purga-

tion. Chopped *carrots* are also a very useful addition to those greens. [See, also, in APPENDIX, *Mangel-wurzel, Lettuce, Hay.*] Country people give their horses potatoes that have been boiled, for food, and where they can be procured while summering your saddle-horse at home, may be profitably adopted in moderate quantities for another of those *changes* in diet which are found so desirable on the *alterative plan.*

Q. For *stagers* and *post-horses*, also, *potatoes* would prove a very acceptable provender, instead of *hay*, I should think, during a busy time of it, but never saw it tried on a large scale.

A. Nearly half an hour is consumed in eating each pound of the latter, that is to say, three hours for a stomach full of hay, whereas the same animal may devour a sufficient meal of potatoes in a quarter the time; he would, of course, gain five hours a day for *lying down*, as such horses are wont to do, in the intervals of their ten or twelve mile stages forward and backward daily. When their labour is much required, more time would also be saved by giving their oats broken, or oatmeal along with the potatoes.

Q. You have said very little about exercise, nought concerning dressing or water.

A. While your horse is upon green food the craving for water exists no longer. It may be allowed him at will; to which end a shallow vessel may be placed in a come-at-able situation, and be oft replenished, upon the sly, so that we may ascertain what is going on in this respect. If he now

require as much water as ever, 'tis the effect of his *exercise,* which is thus proved too strong for his present mode of living, and must be abridged; or 'tis the effect of a bad habit, and it must be restrained. As to *dressing down* your horse, he will require very little whilst on green food, especially if he can be accommodated with being out-doors, as I before suggested; whilst your *physicked horse* in-doors does better for dressing.

Q. You would adapt every part of his treatment as near as might be to the out-door system: the open air, I understand from you, is refrigerant of the skin, and serves instead of rubbing down?

A. As far as *health* is concerned, it is so.

Q. But the supply of green food sometimes falls short, not to be had through some devilry or other; would you in that case return to hay and oats awhile?

A. If you do, you must increase the amount of exercise, or you will soon have good occasion for physic-giving—which is always to be avoided, and *strong doses* ever. But better diet him at such intervals on less nutritious substances, though *as much in bulk;* as oats and chopped hay, or bran with the oats, which some also give on the same days with green food; whilst others sprinkle these with water, which secures the certainty of *mastication*—a very important feature in horse-keeping, whether as regards health, economy, or work, which would not, of course, be very hard under those circumstances.

Q. Must we then withhold the horse's food

when he lies idle, and increase it when he is worked, that is to say, in *strong exercise*, and so "the more work the more food?"

A. Not exactly so; you go too fast for me: 'tis the reproach of youth that they always run into extremes; though I really don't know, my fine fellow, whether an over-fed horse would not derive as much benefit as man does, from being compelled to observe a *maigre day*, occasionally—only this must not be tried on whilst he is training into condition and *wanted*. My objection is to *the excess* of either food or exercise, the constipation produced in this way upon racers in strong exercise, is ever extremely obstinate; and the quantity of aloes must be then increased to a harmful amount, or grossness appears on the skin—like farcy. When the hunter is brought back from grass to oats and hay, the willing exercise he recently took while at large should not be relaxed in the least, but augmented by little and little, as you increase his daily quantity of oats, until these are given to the full allowance; his exercises should then amount nearly to a sweat, on alternate days, in the morning, and a short gallop every afternoon—if he be cut out for speed; but if calculated for a *lasting one* over a deep country, to go after heavy hounds, two or three long breathings a day does better. In the case of a thorough-bred in training for the race, which has not been to soil, the effect of dry feeding and strong exercise is to cause constipation; this begets the necessity of purging this class of horses whilst so training, as the costiveness is daily becom-

ing more obstinate when neglected, and he declines in the extent of his *stretch*. But whatever your horse is designed for, let him begin at short exercises, and do each day a *little more* than the preceding, until you have "brought him to his wind," or the best *length* he can do without distress, (which includes also a trial or two of his greatest strength and best speed united,) doing at last nearly as much as he will have to perform in the actual chase, race, or journey, according to what he may be cut out for.

Q. Aye, thus it is you find out the bottom of your hunter, and *improve his wind*, if the horse be not taken out for strong work too soon after feeding, nor absolutely empty of a morning.

A. No *hay* on his stomach, at any rate, though you do not *feed;* and if the *going out* be very early, no occasion for *feeding;* if *not early*, then a small feed betimes will be proper; he will perform his day's work the more easily with it than without it, and this ought to possess recommendation sufficient.

Q. *Speed* will be impeded by its adoption, be assured; moreover, after the corn the horse would crave for drink, which would ruin all.

A. Not after so small a quantity as a quart or less of corn, or a handful of crushed beans to an *old hunter*. But neither on this or any other occasion give your horse to drink immediately after feeding, nor just before it; for by the latter method you fill the large gut, and by the former distend

the stomach. And as to *speed*, I have yet to learn in what way that of a hearty, ravenous horse, full grown let us suppose, which is entered to run heats, or over a Craven or King's plate course, can be retarded, when the main tug of the race—its termination, rather tries its strength than its fleetness, which is then pretty well taken out of him.

Q. For three-year olds, I perceive, you think the case is different.

A. Much depends upon the ground itself; if heavy, and strength is requisite to bring the young ones over a long mile and three quarters course, racing all the way, a *lasting quality* is indispensable to winning, more than mere speed. On such occasions the best trainers give something more than bread and butter for breakfast—seven or eight hours before running. The old plan of running horses quite "empty" is not worth a straw.

Q. Your mode of gradually increasing the exercise of the unconditioned horse, inures the lungs by degrees to fill to their utmost capacity, which promotes his lasting qualities.

A. It promotes the expansion of his ribs, and of the muscle that joins them together, braces the membranous lining of his windpipe, (which in aged horses is liable to collapse,) and promotes the due action of the *diaphragm*, or rather the *skirt* thereof. Be sure you go on gradually, step by step; for if you distress your cattle, or cause a cough to come on at the end of a gallop, as would be the case if you proceed abruptly, or if you have

previously given dry hay, or the stomach is near full of corn, you must then desist and abridge the length of your gallops, beginning again on a future day at the lowest *length*. Avast heaving! ere you rupture the cells of your horse's lungs into each other, and cause a minor description of *broken wind*, that time and a repetition of the same speed confirms.

Q. *Distress* is known by facility of perspiration, by a certain uneasiness of manner, by faltering in his paces, by—

A. It may further be known by the pulse continuing irregular as well as quick long after the gallop, and by a kind of *catch* in the breathing, wherein the inspirations are tardy and defective, though each expiration be as right as a trivet: *chronic cough* is superinduced by repeatedly overmarking your horse thus, in pace and length.

Q. Though many horses also become broken-winded by being worked on a full stomach, I apprehend that moderate work, especially if that be slow, upon a middling feed of corn never affects the *lungs*.

A. Though, if much dry hay occupy the stomach, with a denial of water, the lining of the throat is affected, which occasions a wheezing cough in his endeavours to get rid of the particles that tickle and irritate the passage. Oh, never fear working a hunter well with a moderate feed in him, provided he have taken it early—say at six o'clock, when the appointment is ten or later, according to

the fashion of 'these degenerate days." If "little work less corn" be worth aught as a maxim, then the reverse, "much corn much work" must be a wiser,—and a much better than either is "the more corn the more work."

The opinion of our forefathers on these points appears, from some old sayings, to have tallied pretty even with my own. Here is one of them:—

"THE HORSE TO HIS MASTER.

Take care of me a mile out and a mile in;
Up the hill, spur me not,
Down the hill, push me not,
On the plain, spare me not,
In the stable, *forget me not.*

Q. But you would not withhold his regular feed on the days of rest, I think you said?

A. There are *no days of rest* in nature: when man domesticated the horse with high keep, he had no right to deny it the exercise that was designed by the great Author of all for digesting his food—it was a cruel proceeding.

Q. It might be given to him *prepared*, partly digested, i. e. *cooked.*

A. So be it; but being carried to its extreme this course would alter the power of digestion in a horse so treated; bad blood would accumulate, or it would become too rich, lose its fluidity, cease to flow naturally, and disease would spring out of this slothful mode of life.

Q. The humours would become visible on the

in: I now perceive that I did not examine the fair close enough to form a safe opinion.

A. No! You looked no farther than your nose; s usual with all those of your age and standing in ociety.

Q. I'll owe you *one* for that. But I have seen orses on board ship take so *much rest*, that when t on shore they have staggered as if groggy. I oubt much whether some of them ever recovered ie perfect use of their limbs.

A. I have the like doubt. This must have happened during one of your sea-voyages, I guess; ut why did you not prevent this stiffness of the oint by artificial action? Though the horses be *ung* up, the means of giving motion and a temorary resting place to the hoof, seems to me easily ontrived. Do you know, that the *Arab* horses rought to this country by the *Mediterranean*, ever turn out so good as those which formerly ame to us through France? And this I take to be ne reason why,—but we begin to deviate.

Q. Would you take out a hunter on the blank lays? Would you not at least give him complete est the day before an appointment?

A. No! Nor the day after, either; I would give im a *breathing* rather, though not a *sweat*, to preare him for the coming day; and the day following a hard run he should also *go out*, at any rate a ittle farther than *to water*. The fresh air revives he spirits. I would carry the principle to every radation of cattle; and were I in charge of such,

even the dray-horse should be walked forth on Sundays.

Q. A pretty sight, truly; Messrs. Whitbread's thirty greys, for example, taking an airing on the Sabbath-day, would sound well over the stones!

A. They would be the better for it, notwithstanding, and then be less disposed at any time to stand and sleep, as is usual with *old ones* of that breed, which I have seen fall in the streets. One of their teams did not lie down for several years, I find; and Mr. Shore, the miller of Nottington (Somerset), had a horse which did not lie down for sixteen years, to 1828, when he fell and broke a leg.

Q. A log hung at his tail would have prevented this accident, I should think?

A. So should I; as I have observed such horses ever tumble forward; the log would act as a counterpoise.

Q. Well then, *out every day*, am I to understand?

A. Every horse of the better sort every day exercised, from eight to twelve miles. Meantime, all the *litter* out, the stables emptied and well cleansed, *racks* cleared out and re-filled, gutters washed and drain-holes opened,—in warm weather, employ a profusion of water. All which operations, if performed while the cattle are in-doors, afford cause of much discomfort, especially to the high bred and the irritable. Then, also, all windows and doors open, at all seasons, except during sharp

osts and fogs. The practice of watering horses a distant stream is a good one, inasmuch as it sures a two or three mile airing each time; it poss-sses no other advantage, however, the same ater being commonly found nearer home, ex-pting the pleasure the animal derives from *going* take it, being more natural to him than swal-wing half a pail full all at once, and standing still ith it cold in his inside.

Q. Which makes him sweat unnaturally, I have bserved, by the hair becoming roughish, in a short me, if it do not turn and begin to stare imme-ately.

A. By checking the action of the stomach and testines, I believe, and causing those spasmodic fections thereof, which we next day detect and rm *colic* or *gripes*, and give the cordials; though hen the cold water has done its utmost mischief, *olic* is not then the disorder the animal has in-urred, but another much more virulent, namely, *flammation of the intestines*—when the exhibi-on of those same *cordials* would kill the patient utright.

Q. Concerning which two disorders I mean to ax your patience a little more in the sequel. [*Con-ersations* x. xiv.] At present, food, air, and ex-rcise claim our undivided attention. I am now ware how much the continuance of health de-ends on regularity, in the quantity of feeding nd watering, likewise on airing and grooming, as ffording the horse pleasurable sensations, all

which combined, conduce as much to his *condi*
tion almost as the meat he takes.

A. Much also depends upon the *manner* o
doing the same thing by two differently tempere
men—one being of an *indifferent* turn in tha
respect.* His treatment, likewise, should no
be capricious as to *hours* of feeding and watering
the same amount of corn at three times doing mor
good than if given at twice, and whatever the a
lowance of water per day, it should be divide
into four services at least.

Q. At our first interview (p. 2) you observe
that some horses were characterised by a cravin
for water; now, I have met with many that car
little about water, and refuse it, or but just di
their noses in the pail or the stream.

A. The first are, also, ravenous eaters, hav
large stomachs, and a craving appetite that is neve
satisfied, but of strong constitution notwithstandin

Q. Their *manner* of going is likewise anxiou
impatient of control, and irritable; when *runner*
they perform this pace with the head down.

A. Because wide-made at the haunches; an
although deep-chested, are usually narrow befor
yet not coming up to my notion of disease or ma

* *Well bred* horses are cognizant of kind words and melle
voice. the Arab and Tartar nations, from whom we derive t
stock, are even said to converse with their steeds. When
horse is kept alone he appears to congratulate the return of
keeper; as an antidote to loneliness, some persons keep a go
in the stable—in other respects such a guest is unserviceable

onformation of the parts. We should carefully void distending the stomach of such horses by giving large drinks of water at any one time, but ather divide them into five, six, or seven services day, provided the value of the animals so addicted varrant as much care. Neither should these drink oon after feeding, as this swells the corn.

Q. The example operates beneficially upon the ourth description of horses, those which care little bout water, which are also, invariably, poor feed-rs, and tender of constitution. These require oaxing to drink, which ever begets an appetite or their meat. [See *Conversation* ix.]

A. Always; as it cools the blood and supplies he several secretions on which health and vigour so much depend. After you have extended the capacity of the stomach of such a horse, with augmented services of water on his corn, you may inspire him to increased exertions by means of a handful of split beans occasionally, previous to his gallop, and then work into him better pace and greater lengths in consequence.

Q. Why, the management of the watering is of equal moment, in a conditioning point of view, to the regulation of his feeds.

A. Every bit. And should the horse's appetite outstrip the intentions of his trainer, in his endeavours to keep down *flesh*, by strong exercise, then he has recourse to physic for his auxiliary.

Q. Horses training for speed evidently improve their *stretch* after physic.

A. Those kinds I have been speaking of particularly so; in truth, horses we would train to strong and rapid exertion perspire so much that they demand a greater quantity of fluid to keep up the supply. Your *long-bodied*, reedy horses, do not form an exception; but they are the most uncertain animals going in this respect, some of them being light-built, fast-goers over short courses, and moderate in appetite; others, again, are strong-constitutioned, robust, and hearty feeders; they live to the end of the chase or race, be it never so long, and do the thing respectably, if not toppingly. These last are also disposed to crave for water, but eat still more voraciously, and should be stinted in their appetites, and watered often, in small quantities, while in training.

Q. Then, again, there is the great bulk of horses that belong to neither extreme, they do not crave overmuch, nor refuse food or water; qualities these that reside in the square-built horse, one I mean that you can see the light square under him—that is to say, neither high-mounted or long-backed.

A. Such horses are ever good goers, always playful at exercise, and seem to enjoy the race:—thus closely connected is our best breed of horses with the disposition to crave for water inordinately, or, on the other hand, to put up with a moderate quantity of this indispensable lubricator of their parched animal system.

Q. The admixture of oatmeal, bran, or sugar is found to entice those delicate horses to drink, o

which we were first talking. *Salt*, given in corn or hay to the horses "suspected of small stomach," [*Conversation* ix.] induces them to take more water, so as to distend the stomach to a desirable capacity. [See APPENDIX, *Salt*.]

A. These articles are likewise goodly correctives of water, to which we may have well-founded objections.

Q. The qualities of water vary much, and ought to undergo examination: it carries off horses of great value—if very cold at the spring or draw-well.

A. As it does if impregnated with minerals; or with rotting vegetable substances, as the falling leaves, &c. of autumn.

Q. Thorough-breds in training have very susceptible insides, which such waters either irritate or relax according to circumstances.

A. We may divide all water into *the hard* and *the soft* kinds; the first mentioned, rising from a stone or gravel substrata, is commonly drawn from the well and drank upon the spot; it is the prolific harbinger of internal inflammatory complaints and of tubercles on the mesentery, the liver, &c.

Q. We can detect this water by making a lather with soap in it, which curdles if the water is hard, *i. e.* impregnated with stone, whereas if not so the soap dissolves equally, and impregnates alike the whole of the water. Indeed, all water is thus impregnated with some foreign substance or other.

A. Let it be procured a long time before required for use, and kept in a tank or cistern, exposed to the sun. Give less at a time and oftener, when the obnoxious kinds cannot be avoided. I am convinced that many a horse has lost his race in a distant part of the country, through not being inured to a certain kind of water that is inoffensive enough in itself. The chalky water of Kent, in parts of Gloucestershire, below Bath, and along by Basingstoke to Winchester, is that which most completely belies its first disgusting appearance. I am not certain but it may possess a salutary effect on the constitution of some horses, upon the same principle as that ascribed to lime-water, of the nature whereof it partakes: solvent of stone, destructive of worms, absorbent of bile, I apprehend a better corrector of hard water than chalk or whitening cannot be employed *artificially*.

Q. The experiment would be worth trying; but more appalling is the turbid water of stagnant brooks, and those outlets from factories and house-drains that, under a glassy surface, leave a foul residuum below.

A. The latter are positively deleterious in summer time, and the harbingers of fever, tumours, and those other indications of depravation in the secretions, which we will term "the humours," let the doctors say what they like.

Q. *Charcoal*, pounded in water, and stirred up with such putrid waters, is said to *carry down* the

obnoxious animal matter, and leave a good wholesome and drinkable water above.

A. 'Tis good to know, though we desire not to put in practice, the means of discovering and amending this all-important beverage.

Q. Boiling does it, I believe, in all cases, except that of *iron spring*-water, which may be detected by the rusty colour of the stones, &c. over which it runs, or by soaking a linen rag well in the water, and, after drying it, pour a little tea on the same, and it will assume a *buff* colour on being again dried.

A. From unsettled field-waters, and those flowing from the hills after rains, we may expect a more latent enemy: the earthy particles of these subside in the *(cæcum* or*)* blind gut and form concretions, that the heat of the body converts into *stone;* as happens more facilely with water from a cold spring, which contains the principle of stone in abundance; passing from that gut into the kidneys generally, such a stone will there stick fast, and assume the most hideous cell-like shapes, displacing one entire gland, nearly, so that the whole function of separating the urine from the blood is then performed by one kidney only.

Q. How provident are the ways of Nature! I observe, by some stones I have seen severed in two, that a little pebble which must have been taken with the food, formed the nucleus or central beginning of such a stone in the bladder, whilst others are found in the passages leading to it.*

* Though sharp pebbles miss their way, occasionally. A

A. An accident that happens most frequently to the gross feeders and ravenous ones just alluded to; but, whenever high bred horses incur this disorder, their sufferings are more acute in consequence of the superior irritation of which they are susceptible. *Oatmeal* and *beans* bruised for horses are thus charged with *stone-dust* occasionally, by millers reserving their coarser mill-stones to be employed in such services, as also when their stones have been newly chipped or *roughed*.

Q. Your *iron mill* is preferable, all to nothing.

A. Always sweet and clean; never clogs like the old hand-mill. Ours was made by Stockdale, in High Holborn, I observe; but his charge is much too high for general use.

Q. Such particles of stone as we have been speaking of often subside in the *binn*, I find, by rowing about the meal, and will be found at the bottom.

A. Or, more certainly, on mixing oatmeal gruel, when the rough bottoms or sediment may be profitably thrown away; indeed, you may feel it grit between the pestle and mortar, when gruel is made according to my directions. [See APPENDIX, *White Water*, No. 4.]

Q. You order water gruel to be given frequently, I observe, and in large quantities.

A. Always to the ailing animal, as well as to any that may have performed a hard day's work, young

peculiar case of one such making its appearance at the point of the yard is detailed in the *Veterinary Surgeon*, page 141. I could not reckon this among the *calculi* spoken of above.

or old, with the addition of crushed beans to the latter. Indeed, I would give no beans unless crushed: young horses do not stand in need of them, and the teeth of old ones are past grinding them as they ought, so bruise them by all means; bruise all beans.

Q. In Flanders they give their working horses all kinds of sloppy food, as grains, wash, &c. and every green thing that grows, nearly.

A. Which gives them those washy carcases we so little admire. I never saw them at such work; but all we get from there have large flat hoofs, and are of the heavy kind.

Q. They bring the best from the county of *Munster* and other parts of Lower Germany, which more resembles our Craven country: all the Netherlands are swampy, save a few spots, as I may call them. In some parts they give their stage-horses a food of—what do you think?

A. 'Don't know any thing about them. Not *milk*, surely, as the Arabs do their horses; when grass is not to be found, they give nothing else. 'Tis said, they drink the mares' milk themselves, and give camels' milk to their colts; whilst their filly foals are allowed to suck their mothers,—at least, so a late French traveller tells us, after living among them two or three years. Well, as to the Germans?

Q. The driver carries a bag of dark *bread*, made of buck-wheat, which he slices off and gives on the road, much after the fashion of our stage-waggoners

with a wisp of hay; and this food they call *bumpernike;* whilst in Normandy, they grow a plant, with a yellow flower, in abundance, for their horses of every description.

A. No heart in either, as oats have. Let them contrive whatsoever they may, nothing gives to horses vigour and strength like unto all-congenial *oats.* Fed on these, an ass may be brought into condition fit to drag a load at ten to twelve miles an hour. Even the *training-bread,* formerly made in race-horse studs, and composed of oatmeal, wheat-flour, and bean-flour, equal quantities, mixed up with ale and eggs, and baked in cakes, is now generally disused, though good for old horses. I wonder what our old ancestors did before oats were brought over?

Q. Much the same as the Germans, I suppose; as well as they could. But they had no racers in those days, though they bred many horses, and exported them and all other kinds of cattle to those very parts.

A. But now we import their heavy, unwieldy, draught-horses, that are known by the immense crest, long body, and large flat hoof; with some coach-horses, too; but few for the saddle, I believe I never saw one that I should call a tight, well-built, firm horse; none to be compared to the Cleveland-bred ones, not in a day's march.

Q. You bear a little prejudice against the foreigners. We do get a few good chariot-horses from them, occasionally.

CONVERSATION VI.

Gross Habit. Grooming, its Benefits: Litter; Blear Eyes.

Q. Those large foreign horses we were speaking about yesterday, do not seem to carry themselves well, with their bellies full of our hard meat, with which they are stuffed to repletion by the emulative pride of their London owners.

A. Everlastingly uneasy, snorting, and casting off the superabundant secretion from the throat—both windpipe and gullet, I should think.

Q. They seem like pampered christians, bursting with choler.

A. Whether narrow or flat chested, these, nor any other breed, are difficult to keep in condition, if that be *your fat condition.* We often hear it said that such a horse "never thrives unless he have *plenty* of corn;" of another that it is always "found at the rack," to denote its ravenous disposition; this is as much as to say that his circumscribed chest, and consequently bad respiration, prevents his coming up to *working condition,* but that much gormandising clothes that defect with fatness, though it evidently hinders the due action of the lungs. Hence the uneasy, burly manner of the French and German horses.

They always appear to me as if their skins

were too large for their bones, and these not tightly strung together; and then their new mode of living fills up all the intervals with fat; an incommodious, enervating, and gross habit of body, alike opposed to exertion and to health, unassisted by purgatives. I once saw the carcase of one of those heavy ones, which had been slain in full health, in London-streets. When the skin was removed, the whole external surface, down to the hocks and knees, was completely covered with *fat*, utterly obnoxious *fat!* What service could all this fattening answer? For labouring cattle I abhor the thought, whilst for *pigs*, indeed, for bean-fed deer, and oil-caked oxen, the thing may be suffered, nay is delightful.

Q. Cart-horses in town are always feeding; the nose-bag goes on at every *rest*, though I believe 'tis mostly chaff.

A. Who's to blame? Fill them with gross humours first, and then physic off the ills you yourselves have created; or prepare to expect disordered intestines, staggers, molten grease, inflammatory complaints, tumours, and so forth. This species of mistake is not confined to the owners of the lower description of horses.

Q. Many of those evils are augmented by the practice of standing this class of cattle upon their litter of several days' accumulation. The feet invariably suffer; and although not *every* species of disease, yet enough to cripple the gait. What horrors do not such feet present, augmented by the heavy pulls they are compelled to perform, with

the hoof brittle, thin, low-crusted, and pommiced, often with great fissures too.

Q. The London art of shoeing such horses, the filling up cracks, and adapting their shoes to *awkward tread*, you must allow is very ingenious. Those horses seldom lie down, I presume, because they always stale on getting into their stalls.

A. So do some other kinds; they wait for the straw, as it prevents splashing against their greasy heels, &c. which tells how necessary 'tis to leave some of the old litter for them outside, as an enticement to stale. No, they have less occasion to renew their strength by lying down, than your stagers, post-horses, mail-horses, and those others which are constrained to quick action; for, being once down, the former find a difficulty in regaining their legs, whereas, the quick goers no sooner feel their fatigue gone off, than up they get, fresh as the daisy, ready to feed, and fit to start.

Q. At our coach-horse stables, we do not clear out the best of the litter in winter, but shake it out and get it up, after allowing the stall to dry, against the partition. If there be a disposition to lie down after work or exercise, we encourage it by making up again.

A. The additional expense is well repaid, even for the most ordinary cattle. You may observe horses that have been unused to the practice, when suffered to stand on their foul litter during the day, do so in a shifting uneasy posture, long previous to the swelling of the heels, that inevitably takes place

if persisted in; also, that on the days when they are not taken out, as on Sundays, the best eyes of healthy horses close partly up, owing to the vapour and heat of urine and dung, and of rotten straw, that is incessantly ascending. But if those animals are at any such time removed to a clean stable, those symptoms pass away, the eyes invariably expand to their natural size, whilst the manner of standing is restored to the healthy and vigorous style of an animal quite at his ease.

Q. I will try the experiment on Sunday. *Cribbiters*, and those suffering under internal galling pains, as *the worms*, or long-standing affections of the *lungs*, are also induced to eat their litter, under the circumstances described, and thus increase the evil.

A. *Physic* then again becomes necessary, to restore the depraved appetite, instead of that necessity being obviated by proper precautions, and ventilation is among the chiefest of these.

Q. This and some other topics (and, among the rest, *physic* itself) I reserve to a future opportunity. Neither have we said aught of actual *grooming*, variously termed dressing, rubbing down and cleaning, of its beneficial effects, and how restorative a strict application of the brush, and, perhaps, the curry-comb in some cases, is to the preservation of that health which is so deservedly matter of boast with you.

A. By exciting the nervous system, exhilirating the spirits, by increasing the action of the blood-

vessels, and thus compelling the heart to quicker vibration, and affording to the animal pleasurable sensations: these are the immediate effects of rubbing down the animal in any way whatever, to say nought of the fat and humours which are thereby dispersed and finally absorbed and sent off by the proper evacuations.

Q. This duty is too well known, however, to need my troubling you with further questions; and, as to *the stable* itself, its construction and fitness for the inhabitants thereof, these are topics quite beyond the groom's situation in life.

CONVERSATION VII.

The Stable: Ventilation—draining. Properties of Air, Gas.

A. What did I hear! "the groom's situation."—By no means; I crave your mercy awhile: nothing that pertains to a horse lies beyond his ken. I say *beyond,* too! No subject whatsoever is above the reach of a man of common sense, especially when so closely connected with his avocations in life as a stable is with a horse, and a horse with a groom. Neither should the head man of a stud hesitate to bend himself to the meaner offices, when the welfare of his horses demands

manual assistance that is not otherwise at hand efficiently. For example, he should know how to put on a thrown shoe, though that be with a stone on the road, he will then know when this service is properly done; give all physic with his own hands; fasten bandages expertly; and, though he have plenty of helpers, lads, and junior grooms about him, never flinch from administering a clyster, or back-raking, or any other of the less agreeable operations; because the cheerful acquiescence in such offices tends to infuse into those about him an active sense of their duty, and to inspire the young and inexperienced, who look up to him as a practical monitor, with a due respect for his assiduity, if they do not reverence his talents.

Q. Your remarks are very just. I did not reflect, that your experience and constant anxiety to discharge the duties of your situation with credit to yourself and to the advantage of your employer, must have furnished you with much sound practical knowledge on this as well as every other topic connected with the horse. As to the construction of stables—you must have put up with some that were very unfit for their intended purposes, and others that were built with every convenience—expressly to your taste, perhaps.

A. People do not rebuild premises simply to adopt some new invention, however demonstrably beneficial; so I will not occupy time in describing how stables *should be constructed* for this or that particular purpose. The object should be for us to

render such ancient buildings as healthful as possible, by contrivances adapted to remedy the defects we may find at them.

Q. The *principle* being, to admit atmospheric *air* equal to the quantity consumed, but not a *current* of it, in order to expel the vapours, saline exhalations, and gas, that constantly arise from the *several evacuations* and heat of the inmates.

A. Rather say, "to permit those gassy vapours to escape;" for the tendency of all such bodies is to *ascend* upon the atmospheric or healthy *air*, unless, being confined together in a given space, (a room or stable,) the two airs mix, and pervade the whole area so circumscribed, when further stimulating the animals' lungs and skins, it reproduces itself over and over again.

Q. Aye; it has the same buoyancy, or disposition to ascend, as the gas that impels our balloons upward; having the like quality of being *ignited*, too, as the same gas that is burnt in our street-lamps. It must, therefore, contain some quality that is totally different from the pure air, and insomuch unfit for mortal man or beast to breathe and live healthfully. Whoever advised the lighting a stable with gas was not a good judge then, unless a shareholder in some gas-company: a mephitic odour always issues from the burner, the light greatly destroys the pure air, and the gas is frequently found to escape from the pipes, and even to rise up through the pavement, occasionally.

A. The action of the horse's lungs being twice that of man, besides the multiple of these with his greater bulk and heat of carcase, accounts for the superior destructiveness of stable air, or rather *gas*; a fact any one can put to the test if he will condescend to rest a whole night with his horses, as I have done, and, partially, several times in *full stables*, to say nothing of my boyhood, when I literally slept with my horses.

Q. You found the air oppressive, no doubt, in the full stable.

A. After the first hour and a half excessively so, for it was during the —— races, formerly, where I suspected a fellow of some foul intentions towards my horses in the adjoining stables, as then happened too frequently; so I did not *sleep*, nor intended it. After the second and third hours had passed away, during which I suffered great oppression at the chest, not to mention the stench, the *pain* wore away, and I felt comparatively restored, but still perspiring copiously, with a slight discharge at the eyes and nose.

Q. Some change had taken place, I conclude, in the state of the ——

A. In *me*, and no where else: my lungs, I apprehend, having been saturated throughout with the noxious gas, the cells at length lost part of their resistance and elasticity, when the feeling of oppression ceased and the gaseous poison had complete possession of the pulmonary function. Wha

a very pretty state I should shortly have been in, if the full glare of morning had not relieved me from my watch.

Q. The remedy is evident: a ventilator would cure this.

A. A very lofty stable, say twelve or fourteen feet high, would contain as much of this noxious gas above the animals' heads as they would produce in one night, probably; a benefit incalculable in severe weather, when we might safely close all the apertures, those at the doors being ever the most detrimental. One less elevated would effect the same salutary end, partially; but we most frequently find the stables of middling proprietors built in a corner, narrow and confined, and very few that you may not reach the ceiling of with your whip. What is then to be done, where the means of improvement, or the disposition to undertake it, are equally beyond control.

Q. In the midst of a town, or populous neighbourhood, for example.

A. If you find not that the first piece of parsimony, or of ill-design, has been partially corrected by another, whereby the gas is permitted to ascend as it is formed, through certain improvident openings, to the loft above, or by way of the racks, &c. whence it escapes by some crazy lattice or imperfect boarded work, then a rustic contrivance, that shall effect the same service, may be applied to the window of such a building as admits of no aperture in the roof.

Q. Or, a more finished piece of *carpentry* t the stables of the wealthy. What is the nature o your contrivance?

A. A cell, or box, placed at the highest windo of the stable inside, having a door, or doors, tha open outwards only, and always stand open, unles blown fast by the wind, or fastened purposely. I you have the opening to make, avoid a north eastern aspect, as you should also for the entranc of your stable. Its depth inward should be one half the breadth of the aperture, which its fram should fit exactly, the lower part slanting outward to carry off the rain. On the inner side, the fold ing doors, of slight materials, are to be hung o hinges, with a pulley and cord that descend to th ground, whereby the doors may be kept open, c closed at will. At night, this cord being cast loos it is apparent that the springing up of a blast wind would close the doors, and, upon this ceasing the weight of the cord, or of something fastene to it, would again open the doors.

Q. A very simple contrivance, truly, and whic may be applied to a more elaborate aperture *in th ceiling*, if deemed necessary, like the top of malt-house.

A. And if the ventilation be considered at an time too much for the inhabitant animals, one the doors may be closed, or both retained by peg or, by passing over another pulley a contrary *pu* of cord, and making all fast, the same object ma be attained.

Q. As in case of sickness, the higher state of nternal inflammations, or in fevers.

A. In the latter series of disorders, the air would efresh and conduce to the cure, after the patient as been reduced by bleeding and purgatives. In ffections of the lungs, sharp gusts of wind can be revented from entering rudely, by stretching a ew yards of canvas, or an old sack unsewed, across he window, within a foot or two of it inside.

Q. *The flooring* has also divided the opinions of he knowing ones, both as to shape and material; hose of *brick* had many advocates, who since bandoned their prejudice.

A. As being liable to get out of repair, being enerally too soft burnt, and so likely to retain the rine and to form small channels. No; good hard arge pebbles are your only material for the body of the stable and gutters, however they may choose o *lay* the inner standing of the stalls with "fire-rick;" having a slight fall towards the middle, but o other *visible* slope in the stall.

Q. In the Netherlands they lay the inner part of he stall with *Dutch tiles,* as they do the bottom of he manger.

A. Dry, cool, and cleanly, and worthy of imi-ation.

Q. A gutter or channel to carry off the urine is ndispensable.

A. But the *slope* this form of floor occasions is evidently calculated to strain the back sinews of the ind legs, besides being further objectionable on

account of the constant wet state of these channels, by the flowing of the urine from the adjacent stalls, in large crowded stables, which occasions to the horses in the lower part much discomfort at all times, and a proneness to acquire *grease*, especially when further aided by a chilly night coming on, which nips the heels whilst in this state.

Q. Some channels are so constructed that the urine of one horse cannot incommode another, either as to dampness or smell.

A. By means of an under-drain, into which gratings, or perforated iron sinks, permit the urine to drop as soon as 'tis passed. Some persons lay these gratings within the stalls, on a small scale, the whole communicating with the main sewer, which terminates outside the building.*

Q. Objectionable, on account of the cold and damp of winter, thus liable to be admitted—to say nothing of rats coming up, and so forth.

A. Both which may be prevented by making a return, or sharp bend at the outlet; by fitting on a trap-door grating, making the end of the kennel take a dip in the water outside. Much water and filth always descend the stable-kennel, and this kind of drain is easily laid open by lifting up the gratings. I have heard of some nobleman whose

* And the urine afterwards profitably employed, where the stables have been erected on a convenient eminence, in irrigating the land, by being pumped from the receiving pit. At *Stean*, near *Banbury*, I have seen this contrivance applied to bullock-houses, upon a large scale.

ables were supplied with a constant stream of ater running through them: how grateful in ummer!

Q. Every body, almost, now understands tolerably ell the great importance of keeping down the ench necessarily arising from so many huge hard-orking animals crowded together, using up the esh air as fast as it enters.

A. But how few, among those who do know, dopt the commonest precautions to admit the re-uisite supply of fresh wholesome air; and fewer ill those who employ that *sure guide* the *thermo-eter*, whereby the temperature of the stable may e ascertained and regulated to a nicety at any me—say a due mean of 60 degrees; and if the ttendant found the quicksilver approaching to 0 degrees, or a still more deleterious heat, he ight be taught to throw open every door and indow, still excluding the sun, by means of ng canvas curtains, with a make-fast or weight anging at the bottom, capable of being hitched a nail or staple.

Q. Since our first conversation, in which some llusion was made to the instrument, I bought *a hermometer* for our stable, at very little less than a overeign in price; but, for the convenience of our pocket, I now inform you the same thing may e bought for half the price at Taroni and Lourighi's, ext the City-road turnpike; of Copini, 217, igh-street, Shoreditch; of Tournerelli, Greville-treet, Hatton-garden; and a dozen other makers.

A. I knew as much; and, what is more, if you are content to put up with a glass mounted on plain box, you may get four or five for a guinea equally good for *use* in every respect, at the same places.

Q. All horses like warm lodging in winter though long usage inures them to bear much cold thorough-breds require more warmth than working cattle all the year round; 'tis the nature of the countries whence we derive the breed.

A. They do not thrive else; but you may over do the most desirable service: and, do you mind me, be the stable never so warm, there is always *current of air* running along the ground from 10 to 15 inches high. The warmer the stable is, the more severe is this current of air, and the keener its rush; which is usually supplied, in the common run of stables, from a faulty door-way, a worn-out step, or some rotten board, time-worn window shutter, or disused key-holes.

Q. All which appear like illegitimate means of admission to aid the ventilation. By the way, I once saw an exemplification of this truth in the case of a stable being *on fire* in London. None could look in at the door for smoke, though all were eager to withdraw the horses; when a fireman went down on his knees, crept to a stall, and having fastened his jacket over the eyes of one of them led him forth safe; whilst two others that remained immoveably fixed to the spot were dreadfully burnt and one so much so that it went to the slaughterer.

ext morning. *Greasy heels* is the consequence
cold air making its way along the ground.

A. Indeed, all disorders of the hind legs that
ise from *chill* or other functional derangement,
e thus originated: whilst the *body* is warm, tired,
laxed with heat, and the blood circulating fast,
ld seizes the heels and prevents the finer blood-
ssels of the foot from returning their contents
to the system, agreeably to the dictates of nature;
e blood thus detained loses its quality, is diseased
ready with fever, and only waits to show its
rimonious nature by the inflammatory destruction
the juices that supply new horny matter;
hence rigidity of the coffin-joint ensues, and
ng-bone and *brittle hoof*, the wall of which is
er thin and unretentive of the *iron defence*,
rhaps *stringhalt*, and undoubtedly *grease;* any
either of which evils are further promoted by
e prevalence of diseases of the urinary organs
at usually concur to afflict the large fleshy animals
have now mostly in view.

Q. In this latter case you give diuretics; what
the others?

A. Do nothing but keep the evacuations steady:
r those disorders do not soon show their precise
ature, farther than increased heat comes to, when,
rhaps, you may *bleed;* but as to grease, though
ways to be alleviated by superinducing more
ine, it is not always that the kidneys, which
rm the urine, are capable of carrying on their
cretory function to a sufficient extent.

Q. Stimulated to rottenness, perhaps! How thi
is effected I will take a more leisurable opportunity
of inquiring.

A. Better *prevent* those evils altogether, I
should think, by making the stalls deep enough to
contain the whole animal, say ten feet, so that he
can neither kick his next neighbour, nor catch a
chill that is replete with such bad consequences.
Try the experiment of giving a horse the loose
stall; and, if he be not an old one, swayed by
habit, he will not lie with his legs outwards, but
the contrary.

Q. The value of a loose stall, or *single horse*
stable, is very great; for the ailing animal, on his
recovery from sickness, or after much physicking,
its benefit is incalculable. In some parts of Ger-
many, they heat the stables, during seasons of great
inclemency, by means of stoves, constructed
outside the wall.

A. Very good, but not a little dangerous; and
furthermore, is liable to make the hearty animal
artificially tender. Horses in strong work are
corn-fed, of whatever *description*, stand in no need
of such an auxiliary in this country.

CONVERSATION VIII.

f preserving Health: Work, Tonics. Legs. Misusage. Powers of going—Physicking, its use and abuse; Preparatives; mode of giving Balls.

Q. The obstacles to keeping a horse in a healthy ate are numerous: besides *feeding* and *exercise*, rooming and ventilation, and soiling, many imortant points remain for discussion; the principal which is, arresting the progress of disease upon *first appearance.*

A. If watching its progress, and enabling ourlves to distinguish between any two or more disders which may be somewhat similar, be not qually important.

Q. How shall we proceed with this inquiry, ink you?

A. Any how suits me, so you observe a little der in arranging the topics, and stick to one at a me, *as nearly as you can.* Thus, follow up what s been said as to the bringing a horse from green od into *condition*, with an investigation of the eans of preserving him in that state *without hysic*, if possible; but in cases where "regular ysic" is rendered indispensable, as with horses aining for the *race-course*, we must apply ourlves to the means of achieving our object of

cleansing out the animals, by using the lowes quantity of drastic medicine capable of performing that service; thus, by combining it with milde substances, palliatives and preparatives may be found in abundance.

Q. This, I take it, is the true *art of preserving health*, or keeping your cattle in proper *working condition;* which, you justly observed, does not always imply *fat condition.*

A. Most assuredly not—unless for waggon horses. The due consideration of this subject includes sober and liberal reflections regarding the *keep*, or manner and amount of feeding and stabling, airing and exercising, the qualities of food and water—on all which topics we were recently talking, together with other subordinate matter worthy of being known to all; though many grooms however adroit in the details of training, are precluded from carrying into practice, owing to superior orders. Every proprietor will have his own way.—

Q. None will be deaf to reason, where interest is so materially concerned.

A. Provided it be *reason* and not *twattle.* Every groom, within the years of maturity, should think twice before he speaks once; he should study his subject a few years at least before he presumes to give advice, as is often done, upon the information of others.

Q. Very material to him is the knowledge-

1. As to what quantity of food and water is needful for each individual horse. 2. As to what course of feeding engenders disease.

A. They termed it "*Glut*" formerly; no doubt, from the word "gluttony," or indulgence of the appetite, which occasioned it. No less worthy his attention are the symptoms that precede any and every disease, that he may take preventive measures in time, or call in the aid of the veterinary surgeon.

Q. The groom, I think, is placed in a much better situation for curing, or alleviating a *first attack* than the doctor himself, according to your maxim at the beginning of our third conversation,—(p. 43); as he must necessarily know *the cause* of the disorder. Hereupon he has but to surcease the course of proceeding which brought it on, and the cure effects itself, without the aid of medicine, or very little of it.

A. *A cause* that is so readily ascertained, ought never in common prudence to have existed at all; and I may add, of that which mostly escapes your notice, that the *cause* of diseases generally, with you young fellows of the *hunt*, is mostly referable to gross feeding with inadequate exercise. The mistaken notion of "giving much rest," to horses in health (whereby you *rest yourselves*) coupled with neglect of the proper evacuations—which none of ye watch after as you ought, is the prolific harbinger of all disorders of the horse, that are not fairly ascribable to hard work, a cold, and pure ac-

cidents: the pest of a rich man's stable is high feeding, idle days, warm clothing, and closed windows. In these latter respects the poor man's cattle have the advantage of yours; whilst he is wofully circumstanced in all others; the diseases of his team are consequently of a totally different nature to the rich man's.

Q. Look at our butchers' nags, in which their owners invariably discover some latent power of *going*, mostly the *trot:* their exercise is brisk and unflinching; the keep full, but not redundant; their stabling scarcely second best. Would you draw a distinction between the ailments of the needy proprietor and those of the rich man's stables?

A. I would go farther, and divide all *acquired diseases* of horses into, 1st. Those of the rich, and 2d. those of the poor, *as to cause*;—thus, those of one entire class I would attribute to repletion, those of the other to starvation; the one kind being brought on by comparative inactivity and pampering, the other by hard work and hard usage; whilst neglect, proceeding from motives equally opposite, fosters both until some confirmed disorder ensues, and fastens on the animal till death, in one description of property; and in the other, until physic and cordials have rendered death desirable.

Q. Like unto many other affairs in life, the wisest course, I perceive, lies in the middle.

A. As you rightly observed at our first conversation, there are diseases *in-born* with some horses,

being the defect of parentage, of race, or of certain obnoxious breeding countries; besides these and *the acquired* before spoken of, let us reckon up diseases of *accident*, as broken knees, bad shoeing, excessive labour, bad roads, the owner's cudgel, and above all, his *physic*, his *cordials*, and his *oyls*.

Q. Why, some of these latter proceed out of, and as it seems to me, are occasioned by the former. By mentioning a "cudgel," I perceive you have an eye to the lower order of these created beings, and presume you allude to a hit upon the kidneys.

A. Or any other very sensible part, as the head, legs, and most dependent part of the belly; but a simple kick of the toe on the latter, or a trivial slap of the hand upon the kidney, when in a state of excitement, are replete with mischiefs of very serious import.

Q. No man can expect a horse to *keep in condition* under any of those several circumstances, unless he attend to each peculiarity of formation, adapt himself to every departure of nature, and as to any harm so inflicted, he must first effect a cure thereof, and then recommence his conditioning fresh: of the ailments so produced, I will seize a future opportunity to take your opinion.

A. So be it. The *preservation of health* is so closely connected with the *restoration of strength*, after the animal has been brought out of an illness, by dint of physic, that you had better consider both at the same time.

Q. Great weakness and lassitude always remai after a fever has been *cured;* especially with ani mals originally of tender constitution, and those o every degree which may have been abused a racing, hunting, staging, or otherwise. Old horse of the first mentioned class suffer more from mis usage than ordinary cattle; one season of over work degrades them from their caste—one day o mal-treatment may consign such to the errand-car or hackney-coach.

A. The unfavourable symptoms all reduced, le us suppose, yet the horse still unfit for work. The same drooping debility attends the removal of *in flammation* in all cases, whether of the lungs, the stomach, the intestines, the liver, or the kidneys but only when *much medicine* has been required to subdue the disorder,—though, when a small quan tity achieves the same end, those symptoms o weakness do not last long, especially with robust animals of high breed, having youth on their side.

Q. Appetite bad in every such case of much physic taking: it must be restored, and that by *tonics.*

A. Else no good can be expected for a long period; though nature does a great deal—nay all.

Q. Our proper office is but to aid her.

A. Gently as we can; though she sometimes throws down the ill calculated efforts of the veteri nary art, and performs cures in her own way, spite of its professors and their boasted *skill.*

Tonics, the species of remedy just recommended

for the convalescent horses, are of *two sorts*, if not *three*; though the writers on veterinary matters teach us to rely too securely on the use of the medical class alone. The proper *tone* or *tension* of the stomach, for example, may be restored, as much by relaxation, or by stimulating that *organ*, as by the *bracing tonics*, according to the circumstances that attend the particular case. If the stomach has been disordered through inflammation of the *kidneys*, as always happens, the tone is already too high, and the exhibition of bark, arsenical preparations, cinchona, and other medical tonics, would but increase this species of derangement. If the disorder has *originated* in the stomach, then indeed will the bark prove itself a valuable bracing tonic, after the disease has been reduced.

Q. Ha! I perceive how it happens that in human ailments, also, *bark* is so uncertain in effecting any good,—and often the contrary; always causing to the patient great dismay at its failure.

A. When the heart also may be said to lose *its tone*, and the *reasoning patient* droops. But to return: the *stomach*, in the first case I have suggested, would be best restored to its *proper tone* by the *cooling regimen—i. e.* green food, carrots, and mashes; for this it is which corrects the long excited kidneys. [See APPENDIX, *Tonics*.]

Q. This *regimen* I take to be *the second class* of tonics.

A. As it is the most *natural one*, and best; un-

less the *third* class be its equal—I mean *fresh air*, taken with exercise—that is to say, *walking exercise*, and a good deal of it, when *at length* the convalescent animal recovers strength sufficient. Whenever the horse's appetite fails, without any assignable cause is discoverable, no febrile heat, no inflammation of any organ, pulse not high, the stomach must be considered as having lost its tone, by the presence of some ill-digested food, or simply relaxed, and aloes, exhibited as an alterative laxative to the amount of a drachm and a half a day, for a week, or until purging takes place; this purgative restores the tone thereof, and is then really a *tonic*.

Q. Great reliance is placed on *regular physic*, in preserving the health of our horses, by Mr. B——.

A. *Regular physic*, or "routine physic," as he calls it, can never be requisite or desirable "upon a large scale." I would have you recollect, that the more physic any animal takes, the more he must take to produce similar effects; and then, see to what dangerous extremes this leads, in the frequent use of strong purgative medicines! If physic bring about any change whatever, is not this indiscriminate purging of a whole stable of horses, or an entire stud, at certain intervals, very liable to find some of the inmates in good health? Then, what is the alteration thus brought about, but a retrocession from sound health to that which is at least a step below it, besides begetting the neces-

sity of following it up with repetition, and imposing upon us the destructive alternative of increasing the quantity to a frightful amount, or of seeing our expectations baffled?

Q. But, when the dunging is hard as pellets, as you will see in many hunting establishments, according to your own axiom, the horse must be emptied; as he must, if putting on *flesh*, or *fat*, so much despised by you.

A. You sadly disorder all the points at issue between us: I do not dislike *fat* for the mouth, but I am not a going to eat my horses, in whom I would as soon see a thick head, or large hoof, as a large belly and fleshy shoulders. Again, as to horses dunging, doubtless you quote me aright, but what I object to is, the *indiscriminate use* of physic upon a number of horses at once, at given periods, whether in that state or not which warrants a purgative. "Regular bleeding," upon which we passed sentence awhile ago, (page 44,) is of a piece with "regular physic;" both in my opinion are exceedingly *irregular*, and contrary to the nature of things animate, which cannot possibly stand in need of this subtraction of the vital fluid, or denial of its *material*, in shoals, as you seem to advocate.

Q. I stand corrected;

A. Or you lie open to the reproach of being an indiscriminate purgator; which you will find a poor recommendation to any rational sporting gentleman now-a-days.

Q. When *hunters* get thick about the legs, as they do after a hard run, you cannot recover the original shape of them without the use of aloes!

A. That depends upon what they owe the misshapen legs to; and we inquire, 1st. Whether it be owing to straining every sinew in going! when hand-rubbing and *rest* (*i. e.* walking, and a loose stall) will restore a slight attack in a day or two; but, if not, we must blister. 2d. Whether this is accompanied by swelling of the fleshy particles, and the skin, occasioned by the animal's languor of system, debility, or being spirit-broken.

Q. When you allow that *cordials* may be given with profit.

A. Yes; but you must also procure healthy dungings, or the mildest cordial may do harm, if repeated beyond the day following the run.

Q. Both objects may be accomplished by giving the *scouring water* the morning after a hard chase; although you were pleased to designate it as "a mere cordial," it never failed to cheer up the horse, and to procure a purge on such occasions—owing to the fatigue, perhaps, that yet remained in the animal, more than to the small quantity of purgative medicine contained in each dose. Here is *the receipt* for making it. [See APPENDIX, *White Water*, No. 5.]

A. This "receipt," as you very *properly* term it, might prove a *receipt in full*, like many other cordials, if given to a horse with inflammation of any internal organ, or fever of the whole system.

Q. I do not perceive the difference.

A. Nor is there any—so far as your famous "receipt" is concerned; since it be would be equally dangerous in either inflammation of kidneys, stomach and intestines, liver or lungs; as such an affection at any of these *parts*, occasions an accession of unnatural heat of the skin, *without perspiration*; this is fever, though *fever* of the whole system may supervene without any of those internal parts being *particularly* affected, which fever any cordial would but increase.

Let us see—"*aniseeds, grains of Paradise, cummin seeds,*" all highly stimulant, but the *second* wisely kept down to one-fifth of a drachm for one dose or service. Half-a-pint of *sherry*, too, to each; no bad Latin, alone; but the water, the quantity of water, the *diluent* renders all sober again. *Sulphur*, a laxative; *olive oil*, slightly ditto; *honey*, to help it all down; and *fenugreek*, I presume, to keep it down, for no other earthly purpose can it answer. Here's a celebrated scouring mixture!

Q. Really, I am quite surprised at your satirical analysis, especially as you must know it effects its purpose, though we do not seem to know *how*; for I have seen you give it under the directions of your late worthy father, from whom I had this receipt.

A. True; all true; but the latter no recommendation; for, notwithstanding my father could "cure," and did succeed with many extraordi-

nary cases, that is no reason why we should not examine the value of every prescription in his much vaunted "Book of Receipts."

Q. Which he valued at "a thousand pounds."

A. But which I value so little, that I never will look into it more. Poor man! his only answer to all my representations, however, dumb foundered me: "I can *cure*, I tell you," he replied ever and anon, dividing *the verb* into two syllables, in proof that nature has done more for the horse than the wisdom of man can possibly effect, or his ignorance of nature and art can counteract! Yet, as he said, he did *cure*; at which I have not ceased to wonder ever since I first was allowed to look into his "Book of Receipts," now above a dozen years since.

Q. Some horses become so difficult to purge at times, that our best grooms cannot get the fat out of them by this means alone, without sweating first and galloping immediately after giving physic.

A. Those are your strong constitutioned horses, required for hard-and-fast work, but which put up flesh when lying idle, or the "getting into *going* order" is relaxed, even for a day; the racer, for example, which is wanted by a certain day, and cannot be waited for, nor can another supply his place, like the mail-horse. My objection to strong exercise for horses *in physic* is valid, nevertheless; because, when the spiral contraction of the intestines, which the aloes accelerates, is at its greatest pitch, galloping adds to the action of the

physic, and may be said to inflict further friction on the bowels and stomach alike. Hence, if we do not say "the horse is worn out" by these means, 'tis very much like it.

Q. I never saw any harm arising from the practice, however.

A. Possibly you may not; the visible effects are slow, I allow, but not less certainly injurious.

Q. And is very commonly resorted to in all the stables I have seen. The method with us was to clothe and sweat at his usual paces the horse intended to be physicked that morning, and whilst sweating in the stable, after dressing and clothing afresh, his physic is given, and he is taken out for his ordinary afternoon gallop, so that no time is lost.

A. This last measure is what I object to entirely; all horses show debility after *the physic* is worked off, and although the strong-constitutioned animals soon recover its effects, the more tender ones suffer longer, and, after all, much *time* is not saved by the method you advocate so warmly.

Q. "Warmly!" Not I; I merely described what I believe is the prevailing practice in all our racing-studs when the horse is wanted for an early engagement; and by some persons generally so. What plan of proceeding would you recommend?

A. Give two or three warm mashes of *white water* [APPENDIX, No. 2,] the day preceding the physic; at night keep the horse short of hay, and in the morning give a small mash early, fol-

lowed by tolerably strong exercise, according to his nature, so that he bring down the contents of his stomach, evacuate, and perspire. Being returned home, rub him down, and quickly give the physic. You will find five or six drachms of the *aloes* in general do as much service as seven, eight, or nine. [Prescribed in APPENDIX and elsewhere]. *I* say this, who am not an advocate for *strong medicine*, even to such horses as absolutely stand in need of purging physic, and cannot from circumstances be taken out for the strong exercise proposed.

Q. I understand you; we were conversing now of the better sort, that by their value deserve superior care, and require reduction of superfluous flesh.

A. The brisk purge, that is *accompanied by perspiration* effects this reduction excellently well, by reason of the heat of his body dissolving the aloes. Not only is the general health bettered, but the mis-shapen legs become fine and strong immediately; therefore, do not neglect to promote this discharge by the skin, which further mashes, hand-rubbing the legs, and rubbing down, effects completely.

Q. Most people keep their physicked horses clothed all the day after it begins to work.

A. To be sure; of the tender ones particularly. But I should remove each piece of the clothing, and having scraped, dressed, and dry rubbed the part uncovered, replace dry clothing, piece by

piece—that is, if the horse required this sort of reduction, and is of tender constitution.

Q. The legs, of course, would come in for their share of attention.

A. Of course; the whole of the muscular system feels the effect of the absorption thus superinduced; the animal is stronger also, and can stride greater stretches in all his paces in consequence.

Q. By brisk physic and much physic I discover you mean two different modes of giving it, or, rather, *preparing the animal* that is to receive it.

A. This is the more necessary, as these better sort of horses in strong exercise are more difficult to purge than your ordinary cattle; whilst *country working horses* never require it, they having frequent opportunities of taking nature's purgative—the grasses, require no physic.

Q. We should then purge all our high-bred horses, I presume, before we commence the *conditioning* of hunters or *training* the race-horse?

A. Psha! As to those *terms* I see no distinction. But even your thorough-breds, if delicate-constitutioned horses, with tender insides, do not stand in need of this "regular physicking" without evident cause, and, when necessary, very small doses effect their object best; and even then the mildest, and therefore preferable mode of administering any prescribed quantity of aloes is to divide it into two, or three, or four doses, giving one daily until the desired effect is produced.

Q. When one can spare the time it requires, this method of proceeding by alteratives, I have heard you say, agrees better with animal nature than harsh physic—

A. That sometimes makes great ravages, by violent and long purgation; which, however, may be stopped, or much alleviated, by coaxing the animal to take large quantities of thick water-gruel, or stout wheat flour-gruel. [See APPENDIX, *White Water*, No. 4, 6.] Take this exception with you, however: when you adopt the system of purging by this alterative plan, there needs no preparation by mashes, nor cessation from strong exercise, until the physic operates; on the contrary, exercise promotes the action of physic *so given* in a mild and therefore not injurious manner.

Q. But why should we keep the horse *to be physicked* short of hay the night preceding? not for the *saving* it effects?

A. Surely not. If you do not prepare the bowels with mashes, no occasion for stopping the allowance of hay; but if, *after* the horse has been mashed in the day, you suffer him to blow out his stomach and intestines with hay, the ordinary dose of seven or eight drachms of aloes will defeat your hopes: you stare, and wonder how this comes to pass, encrease the dose, and thus add to the evils strong purgatives produce in the course of time—if they do not come on immediately. Inflammation of those parts is the most frequently recurring, though it also affects the *kidneys* or the *liver*, if either be previously ailing.

Q. True; and how often do we hear it said of an ailing horse, that "he has not been well ever since physicking!" and "caught a cold upon his physic!" When, perhaps, no more than the ordinary dose has been given. Sometimes the physic fails entirely, though a full dose;—

A. A failure very common in aloetic purges; of which we may say, generally, that the more frequently these are given, the greater is the quantity required to effect the desired end; the coats of the *stomach and intestines* having become paralysed, and refuse to be agitated,

Q. Until several days have passed away, or we give a second dose upon the first;

A. And thereby commit ruin by excessive purgation. Mind what you are about: under my management near a week has elapsed with a regular dose of aloes, before it came off.

Q. Besides the preparation by bran-mashes, I have known *calomel*, a moderate dose, soften the dung. [See APPENDIX, *Physic*, *Aloes*, and *Mercury*.]

A. The *blue-pill* effects the same purpose of solving the indurated fœces; and in either case a smaller dose of aloes operates as much as a large one. [*Purgatives.*] As to "Epsom salts!" I have never used this *saline mixture*, but apprehend it would do well to be given the day after either of the foregoing preparations of mercury; but would in that case require to be exhibited to the amount

of six to eight ounces—an immensely inconvenient drench!

Q. *Purging salts* do not agree with *aloes*: I once saw a violent purgation, from an over-dose of aloes, stopped by giving salts in *gruel* made of boiled wheat-flour. [APPENDIX, *White Water*, No. 6.]

A. The cure might be indebted to the *wheat flour* probably, as much as to the *salts*, which is not an eligible purgative *alone*, as the case you have just adduced seems to prove.

Q. No, Sir; nothing like whipping into your horse in training every eight or ten days, one of your casted balls of aloes. [APPENDIX, *Aloes*, section 7.] Leastwise, if you find he does not dung tolerably regular, and his carcase is distended.

A. Really, this is very odd "stable talk" of yours! This *whipping in*, I am decidedly of opinion, deserves a *whipping out* of you... Flippant—

Q. Spare me, I pray you! 'Tis but the language they use—

A. Which, by its flippancy, shews how little *they* reflect on the importance of the act, who employ such a phrase to denote *physick-giving*. Besides this, you accompany it with pointing a finger at one, as *they* do, to denote your supposed cleverness, but which really proclaims great vulgarity: know better.

Q. I see my error and acknowledge it. Yet you will allow, that the most expert mode of *balling* is to let go the tongue at three or four moments

after delivering the ball: more, if he be an old and crafty horse, who would detain the ball in his mouth, and afterwards cough it up again.

A. Surely; but no less expertness is shewn in the manner of taking hold of the tongue, which many of you practise, like sailors catching hold of a cable, whereby many a good horse gets its tongue lacerated, or torn out by the roots, should he throw up his head.* If neither accident happens, the least harm we expect is, that the animal will prove confounded shy the next time we find occasion to give a ball.

Q. The strong, fractious horse is always shy, and you cannot succeed without employing *the balling-iron*; else how are we to avoid pulling hard at the tongue, unless we submit to have the hand bitten?

A. Take hold of the tongue with the three first fingers of the left hand, pressing the little finger on the lower jaw, inside; whereby you have good hold of the jaw, and as the horse moves its head, your hand moves after it, without any chance of pulling the tongue amiss. Deliver the ball from the thumb and first two fingers of the right hand, and then quit hold of the tongue, without which the horse cannot possibly *get down* the ball by ingulphing it, but is nearly choked by the passage being stopped up.

* While we are *going to press*, an extreme case occurs to a horse of *Mr. Verrall*, brewer, near Brighton, whose drayman detained the tongue so long and so forcibly, that the tortured animal literally bit off four inches of its tongue, and it was killed.

CONVERSATION IX.

Of Appetite. The Stomach; how affected, by bad Mouth, and how affecting Condition. Of Lampas; Paps; Quidders; Bad Provender; Worms; the Straw-Yard.

A. *Conditioning* never can proceed a single step unless the stomach be in good order. If the appetite fail, we must restore it. You would do well to study closely the function of digestion.

Q. *Appetite*, as was remarked by you at our very first conversation (page 11), governs the animal disposition generally, as you had already allowed (page 2) that his *mode* of gratifying the first calls of nature, shows *the temper* of every individual horse, in the performance of his *work*, whether that be fast or slow.

A. I would now go further, and say, that each description of horse—as, 1st. Racer; 2d. Hunter; 3d. Stager or Coach-horse; 4th. Saddle-horse or Hack; 5th. Waggon-horse,—may be divided into *classes*, according to *temper;* and that this may be ascertained by the mode of feeding, and craving for water observable in each individual. In fact, I would test every horse by his appetite or stomach, and *the size* of it; one kind having an over-large stomach, requiring to be filled with food or water; another kind having a stomach too small for sup-

plying the other organs and muscles with invigorating juices sufficient; whilst *the medium*, or duly proportioned stomach, is blest with fair appetite and good digestion, being that kind of horse wherein resides the best disposition and means of going—shape and make answering thereto, as generally happens. Now, considering that the stomach is the central organ of the body, having many and varied functions to perform, receiving and imparting *sympathies* with every other organ and function, from the head to the posteriors; that those functions are cherished or disordered by the substances sent into it, as food or as medicine, or taken through vice or depravation thus occasioned; I do not expect too much when I desire you to believe, that not only the *powers* but the temper, feeling, disposition, *mind*, manner, call it what we may, is also influenced by the stomach.

Hence, I should be led to say, that each of my five descriptions of horse included the following classes, viz.—1st. The *ravenous eater* (always craving for food, impatient, robust, speedy). 2d. The *hot constitutioned* horse (craving for water, long-bodied, fretful, brittle hoof, anxious manner). 3d. *Moderate horse* (of fair appetite, goodly carcase and constitution, lasting). 4th. The *tender horse* (suspected of small stomach, a poor eater, or capricious one, incapable of great exertion, good only at short distances or slow work, given to vice). Whilst the first *two classes* are known to have large

stomachs, and, although making way admirably at the commencement of a race, not to be trusted at the long pull, wherein *strength* requires the support of *bottom*.

Of those several *classes*, the first two owe much of their evil disposition to disparity of size between the stomach and the lower intestines; inasmuch as the latter being small in comparison, (the second class particularly so,) occasions a constant tendency to *heat*, which influences the temper, and is readily raised to inflammatory symptoms. This happens when the body at any time becomes costive, and *physic* is neglected, or fails to *come off*, the disorder ascends to the stomach, and thence to the head, causing delirium, staggers, megrim, in ordinary horses, in the higher bred *sudden death*, of which more anon. [See page 106, *bottom*.]

The fourth class, on the contrary, do not take food enough to satisfy the strong digestive powers of their guts *(ileum and colon)*. This kind of disparity, however, is mostly observable in the lower order of horses, whose owners fill such bellies with large quantities of *hay*; for higher bred cattle, we take some trouble to distend the stomach and blind gut mechanically, by coaxing such horses to take *liquids* often, and in large quantities; sugar, cordials, and *example*, are the means of doing this.

Q. By this mode of reckoning, I should conclude that, independent of individual powers, shape, or make, there must be at least twenty differently

disposed kinds of horse, all requiring separate and distinct consideration, to keep them in health, by means of *regimen* or appetite, and each demanding peculiar treatment when indisposed; for, take whatever precautions we may, disorder will creep in, in spite of our teeth.

A. Staring coat being the earliest indication, if depraved appetite do not precede it, though not previously observable; for the *stomach* always feels the effect of every ailment, and soon shows its evil state on the skin, between which two there exists great intimacy.

Q. Our governor calls it "sympathy," and says that this same sympathy, or fellow feeling, exists between the *stomach* and *kidneys*,* as it does also between the kidneys and *the bladder*.

A. Of course these latter organs being so near together, and both closely engaged in the same office of creating urine, the design of the Creator would not be complete without it.

Q. "Creating" was it you said? That is not the exact word, I think?

A. To be sure not. *Secreting* is the properest term, though I perceive you knew what I meant; *to secrete*, to separate or divide from the other parts of the animal's system, this urine or any other liquid or solid, being the means of continuing life; and when performed aright, that is to say without *obstruction*, health prevails: but if the secretions do

* By means of certain *inlets of the veins*, spoken of elsewhere.

not go on properly, illness ensues:* the stomach supplies the means of all the secretions.

Q. Then it is we say a horse has "the humours."

A. *The humours,* "diverted to a wrong course," you might add; or call it 'depravation of the humours.' When the urine or the perspiration, for instance, do not come off by the proper outlets, what ought we to expect but grease, farcy, fistula, hidebound, those most evident effects of all misdirected humours! Some of the secretions bear the name of "humours" even before they are depraved, and occasion disease. Thus we have the *vitreous humour*, in the chamber of the eye, the humour that moistens the nose, throat, &c. an aqueous humour which is secreted to lubricate the coats of the intestines, &c. But I will refrain from further remarks on those disorders until a future day; meantime the stomach and bowels require our attention;

Q. And the *principle* by which diseases act upon this main organ of the digestive powers.

A. When the perspiration (which is the secretion

* When the membranous part of the animal system, which performs the office of secreting liquid particles for its defence, is affected with a febrile thickening of its substance, its office or function is then performed amiss, and the secretion is now fit only to supply the *matter* of tumour or abscess; but, failing to appear thus *critically* it ranges through the circulation, infects the mass, and *fever* or heat of the *whole system* rages to its utmost; this terminates favourably in critical tumour, or else in *death*; unless, indeed, we arrest its progress by reducing the heat, fever, or inflammatory symptoms in time.

of *sweat*) is suddenly checked by cold, it is then thrown back in upon *the stomach*, the *blind gut*, and other intestines. Loss of appetite ensues, speedily with old worn out, or enervated horses, but more slowly with those of every age, when their lungs being at any time heated by extra exertion first attract the injury, and its baleful influence is shown by a staring coat at the chest; afterwards extending itself to the hinder part of the carcase, about the region of the stomach and blind gut, thence to the flanks, neck, and limbs, as the bowels and other organs may receive the affection.

Q. Drinking cold water produces the same effect, and immediately thereupon the rough coat proves how improvidently the horse has been permitted to drink whilst he is warm; in default thereof, tumours arise at a period somewhat more distant—the remote consequence of a disordered, though full circulation of blood.

A. Quite as often the chill at the *stomach*, no matter how produced, communicates itself to the *lungs* also; but whichever of these two organs is then in the highest state of excitement is also most affected by it; the first-mentioned by the injudicious exhibition of needless and strong *physic* or cordials, the latter by over work, either in *pace* or too long continuance. Remember what was said in our second conversation, of this same chill arriving *by the feet*, either before or behind, or by all four, on entering cold streams. [Page 25.]

Q. Cold washing the feet and legs at home of

horses just come off work is nearly as dangerous, if not carefully dry wiped.

A. Then it is that the blood, being driven back upon *the liver*, this organ is thus the first affected; whence the inflammation communicates to the *stomach* and *lungs*, by means of the blood which has passed repeatedly through the liver to be refined of its bitter principle, and finally fixes on the weakest of those three organs, if not upon that which is most excited—either state being generally described as its *susceptibility*. When it happens that all three organs may be in a weak state, and the bowels excited or tender, then these become the seat of the disorder, as I will shew at some future opportunity; but, when the whole system is debilitated extremely, then *low fever* ensues, with low pulse and a drooping manner; whilst the direct contrary, or *high fever*, follows a considerable state of excitement upon a full habit of body. Mark the variations that exist in the whole series of *abdominal inflammation!*

Q. I do; and am greatly amazed at the various functions *the stomach*, with its *cæcum*, has to perform, besides that of receiving food; as well as the number of ways by which these together may be influenced, and the positive appeal that must be made to the stomach for the cure of all constitutional diseases, and most of the local ones. The digestive powers, of which you were speaking ere now, effect this, I presume, and must be set a-going.

A. They cannot be relied upon; as in such cases the stomach too frequently is found to lose its functions at the first attack, already predisposed thereto by the abuse of aloetic purges. [See APPENDIX, *Aloes*, paragraph the 6th.] This may be either torpor or inactivity, or else excitability.

Q. The process of digestion must be exceedingly curious: exercise, I suppose, keeps the *stomach* and *cæcum* (of which latter we will speak anon) at work upon the food taken into them, until both press forward their contents to the large gut.

A. Ah, like a *mill*, you would have folks believe, to grind the meat; but the stomach is not like that machine; nor is it a *fermenting-vat*, as some do suppose, in which the food is reduced by fermentation; nor is it a *stew-pan*, for stewing down its contents, according to others. But it is no other than a *stomach* after all, a thing of its own peculiar kind, that may *partake of all three qualities*, and I believe does so.

Q. Neither triturated by exercise, nor exactly *fermented* by the gastric juice, nor quite *stewed* by bodily heat, but digested by a junction of all three? I like your definition, vastly.

A. 'Tis only mine as applied to our present subject: I had it from a *doctor*, remarkable for his familiar manner of explaining the functions of animal life.

Q. Looking over what you have written down concerning this point, under the head of "*Aloes*," [in APPENDIX,] I apprehend that when fever prevails,

the *appetite* fails, because the function of digestion by this fermenting-stew-mill process has ceased; then, let me inquire, does not the blood get *thinner* from want of a *fresh supply,* which it could only receive by means of the digestion?

A. Certainly it does, after awhile, which shall be longer or shorter, according to the previous state of the animal's corporeal system; but take this with you—the fever would never have accrued but for the previous thickness of the same blood, its viscidity, its consequent unfitness for circulation, its heat, its tardiness, and incapacity for returning out of the finer vessels (capillaries) where the riot first began, into the general circulation.

Q. We must then look narrowly after the stomach and its affections, and meet the first symptoms of derangement therein by correctives; say a purging ball; or at least alterative laxatives, and subsequently, when all is set to rights, your tonic medicines and tonic regimen.

A. Not quite so soon. Let us see whether we cannot do without medicine, according to my maxim, of "taking away the cause, and the effect will cease," (page 30.) Our endeavours to bring the horse into *condition* are sometimes procrastinated by trivial causes, producing sinister effects, that ought to be removed in time.

Sore mouth, arising from various causes, often leads to disordered stomach, as it impedes due mastication of its food, by the horse swallowing its corn imperfectly broken, and quidding its hay,

which occasions *indigestion*; the effect whereof is costiveness, flatulency, worms, and undue secretion of the juices of the stomach. When this is taking place, the unbroken corn may be detected among the dung; and *the urine* also comes off *turbid*, by reason of the lighter particles of food having been absorbed half digested, by certain entrances to the veins, some part thereof entering into the circulation wholly so.

Q. I perceive now how indigestion so brought on may cause the stomach to imbibe heat, receive back the contents of the intestines by the counter action of the spiral motion these are known to possess, and thus throw up its fumes to the head, causing vertigo, megrims, and so on, which are diseases not exactly confined to the ravenous eaters and foul feeders.

A. Nor to old horses, having defective teeth. But most of the evils may be prevented in time, by detecting any defect in the mouth itself, the most frequent of which, in young horses, is lampas, which have been occasioned by full feeding, and the consequent grossness of the blood—we call "the humours," for want of a better term.

Q. We burn the *lampers* with a hot iron, and invariably effect a cure by washing the gum with a *lotion* made of honey dissolved in rose-water, with a little tincture of myrrh in it. [See APPENDIX, *Lotion.*]

A. Cutting with the fleam, or knife, or scarifying the gum with a lancet, is preferable to the

hot iron, which we should avoid applying to the horse on any occasion—with a single exception, perhaps.

Q. *In France*, the military *farriers (marechallerie)* receive pointed commands from the *marechal-in-chief*, "never to apply fire to the horse on any pretence whatever."

A. Your *chief* must have forgot, I presume, that *firing* is of great service in strains of the tendons, and in most enlargements of the legs after hard riding, though resorted to much oftener than is absolutely necessary in this country. He must have been thinking of the barbarous custom of singeing off the hair in the ears! or of the equally disserviceable practice of applying the shoe *quite hot* to brittle hoof and large ones—I should think, both of which ruin the animals subjected to them.

At any rate, both those methods of reducing the luxuriance of the mouth may be dispensed with by substituting a solution of alum in twelve times its weight of the honey and rose-water, before recommended, (page 123,) and washing the mouth, generally, by means of a small *syringe*. If the mouth be otherwise sore than *lampas*, in consequence of the heat and inflammation so occasioned, having stopped the *secretion of saliva*, which ought to be always going on there, the *alum* restores the flow of this secretion; whereby the increasing humours its suppression had caused to accumulate, soon flow by their natural channels into the *stomach*.

Q. Where they are required, as you say, to assist in the work of digestion, and subsequently pass off by the three evacuations.

All that was amiss being thus set right, peace and order succeed; the functions go on regularly, and the animal improves in condition.

A. Why, yes; after giving soft food to soothe the irritated stomach, as bran-mashes, oatmeal-gruel, and such like; whereupon healthy dungings succeed; but, if not, then compel them, by *purgatives* or *laxatives*, and then tonic medicines, which may be requisite if the mouth has been a *long time* sore, and the stomach and intestines proportionably weakened in their functions.

Washes, bags, and other soreness at the corners of the lips, which also impede mastication, may be removed by the same treatment, as may also the *barbs* or *paps* that come up under the tongue, which ordinarily never need be reduced by any other means; unless, indeed, they come with white points, and then simply pricking them answers the purpose better.

Q. But old horses, as well as those younger ones, go off their feed through defective mastication with the same evil effects; or swallow their corn whole, in large quantities, and get blown occasionally. Others unaccountably become *quidders* awhile, chewing their hay at intervals, or by moving the lower jaw from left to right, contrary to the nature of their kind: have these the toothache, as said?

A. I believe they have; but the teeth of all horses change their *shape*, in old age, and those of some others decay, the *gum* shrinking from them, and leaving small chasms between each. With some of these old ones, an upper grinder on each side grows aslant, gets sharp, and wounds the cheek; as may be ascertained by the horse flinching from *the touch* there. An application of the first-named *myrrh-lotion*, (page 123,) will cure this, temporarily. Give oat-meal mashes, but no more hay, nor unbroken corn, until you have rounded off the sharp tooth with a file that has one side smooth, or that called a *hollow file*.

By the same means may likewise be reduced, a luxuriant tooth—the first of the lower jaw that is sometimes thrown up higher than the rest—usually in strong robust horses; who then exhibit the same symptoms of wearisome mastication as that just described, and which seems the natural means of breaking off the protuberant part; whence man has learnt to perform the same operation with the hammer.

Those may be set down as the more visible causes of want of condition, arising from disordered stomach.

Q. But still more apparent is the depravation caused by the horse eating his litter, licking the wall, crib-biting; all which cause an uncommon waste of the *saliva*, (you were just now speaking of, as being thereby exhausted,) and thus deprives *the stomach* of this natural defence of its *coats*,

besides loading its cavity with harmful unnutritious substances, or incurring the like *low-bred* distention thereof, by *inspiring air into it*, as 'tis *believed*, but not *proved*. There is little hope of reclaiming an animal thus viciously disposed?

A. Certainly none of his ever getting into condition while it lasts.

Q. *Crib-biting* is one of those evil propensities that detracts greatly from the value of a horse.

A. Although deemed incurable, I have no doubt it may be removed by perseverance; one of my lads having succeeded in three or four obstinate cases, through superior cunning as to the likes and dislikes of the animals.

Q. This would, indeed, be a valuable *discovery*.

A. Oh, as to *discovery*, it was no secret at our stables how he achieved his object, though he did not go to work upon our own horses, for I never had a *crib-biter*. When sent for to one of these, he payed the manger-edge, the stall, and other objects of the crib-biter's attention, with bitter, stinging, and other substances that would prove nauseous to a horse-palate, or act as escharotics on his lips and gums. At one place he payed it with aloes, and then putting in the afflicted horse, he tied him up short; this the animal did not relish to lick as usual, it seems; and he found himself no better satisfied when being hitched up to be rubbed down, his propensity was met by a similar treatment. Nettles and culrage were used upon some occasions. When taken out to exercise, the horse

and his rider invariably stopt to take *a blow* at a post or rail, already prepared for their reception, in some way or other of a disagreeable nature, to lick or to bite at; and in this course of proceeding he persevered until the cure was effected.

Q. Very simple and very easy: does the habit proceed from defective lungs, originally?

A. Not so *easy*, unless you reckon a week or ten days' close attendance at stables, with the wits constantly at work, as nought. As to its connection with the lungs, no one, I think, can doubt, who is acquainted with, and convinced by what has been said on the construction and functions of *the lungs* elsewhere;* but we may here observe, that the air having once inserted itself in the cellular membrane at the lungs, distends the intestines generally, besides inducing the horse to swallow all kinds of injurious substances—as earth, litter, old wall, &c. to distend the stomach, and thereby alleviate the pain caused by the depravation, or the absence, of the proper humours of the stomach.

Q. What other obstacles to digestion, that are not absolute *diseases*, do you consider as likely to mar our *endeavours to keep the horse in condition?*

A. Bad provender; also, too much or too little of any sort, capricious feeding; *bad water*, or too

* See more fully, "Hinds's Veterinary Surgeon," pages 84-91, on the Physiology of the Lungs; and on inflammation thereof, pages 193-233; an elaborate series of inquiries, that admit not of curtailment or augmentation at present. See, also, Conversation xii.

much *at any one time*, as well as too little *per day*: a slight cold occasionally, and a *kick* under the belly oftener, inflicted by the unthinking ostler when *backing in* hard-mouthed draft horses. *Worms*, also, obstruct the acquirement of condition; but are themselves only a consequence of one or other of those evil causes just named; being engendered by the inaction of the intestines, and the long continuance therein of such substances undigested and unexpulsed. *Staring coat* is not itself a disease, though the precursor of hide-bound, &c.; but is the common symptom of the forenamed causes of disorder existing in the digestive functions.

Q. Your practice of watching after and keeping up the regularity of the horse's dunging and the other evacuations by regimen, or, in default, by having recourse to medicine, is thus incontestably proved to be the only wise course of proceeding for any one to pursue to whom is confided the important charge of ordering the economy of a stud of valuable animals.

A. The thing stares one in the face at every turn we take in exploring the rise and progress of diseases: however, let us postpone further consideration of these symptoms and remedies until our next meeting, when we will talk of inflammation of the organs of digestion, and the causes that lead thereto.

Q. *Of water* we have already discoursed (p. 73); *musty oats* and *rick-burnt hay* are equally injurious.

A. To *blood horses* either is actually destructive,

by reason of these being very tender in their insides, or very irritable, let us call it; which state has been brought on or increased by the frequent repetition of the strong "regular physic," of which they are the victims, as much as by their hot nature.

Q. *Mow-burnt** is the name bestowed upon over-heated hay, in some parts; and when this has not proceeded too far, 'tis sweet, and our country horses are very fond of it.

A. But is, nevertheless, very injurious to the better sort of horses, causing *diabetes*, or excessive staling, by reason of the thirst it engenders, and the consequent copious drinks the animal is allowed to take, unless this tendency be corrected by giving a capital sampler *of oats*, or a few beans with these daily.

Q. What happens when the oats, too, are musty, or ill-dried, or touched with sea-water, as happens on importation from distant parts?

A. *Diabetes* is then more obstinate, or the kidneys now produce *bloody urine*; unless the injurious nature of those damaged substances expend their virulence on the *bowels*: causing these to *scour* in the mild attack, or exciting *inflammation* when

* Here are *two opinions* on the effects produced by mow-burnt hay; and although both are right, as applied to the several kinds of horses each had in view, *a third* will be found in the APPENDIX (article *Hay*), equally entitled to consideration, from the distinction there drawn as to the *hay* which suffers most by being so mow-burnt, and that other which suffers not at all, or is bettered by it.

more severe, and meeting with obstruction, costiveness, or any previous evil affection of the alimentary canal.

Posting and job horses, and some stagers, being liable to be thus fobbed off with those kinds of damaged foods, and usually worked to the extremity of their powers, fall victims in good numbers after bad harvesting seasons. The more discerning of our stage-coach proprietors, however, prudently prepare the antidotes for the evil: I am happy to bear this additional testimony to their humanity or to their regard to interest—which are, happily, both consistent with each other, in this as in many other points of horse ownership.

Q. What are the antidotes to bad provender?

A. As it seldom happens that all are bad in the same season, the substitution of the good of their kind for the bad of another kind goes a great way to correct the latter. A solution of *salt* poured over bad hay, after it has been opened and shook out, does something to prevent its inflicting harm; good beans and oats (as before said) do as much more. Then there are the potatoes (boiled), sodden barley, the carrots and grass, mentioned the other day, from all which *support* and succulence may be obtained for ordinary cattle.

Q. Ah, the posters and stagers, again! They suffer severely on all such adverse occasions.

A. They get *variety* in their journeys, and this operates some little good for them upon the *alterative* system; when they also obtain the so much

desired *frequent* waterings. Give them the substances just named, a little of each in succession: feed often on this diet, with malt-mashes and water-gruel, and these will further act as alteratives in such a manner as to carry off the offensive hay, oats, &c. as the case may be.

Q. But previous to this *alteration*, disorder has crept in, and is already committing its ravages on the constitution, though not, in general, visible for some time.

A. If the dungings appear in a very pale state—no matter whether *washy* or *indurated*, give the laxative ball, No. 1, to get rid of the offensive matters, by a stool or two; if the horse droops dispirited afterwards, give a moderate *cordial* that is not too stimulant, as of *white water*, No. 5, which really belongs to that class of medicines, and is a better form than *the ball* upon the present occasion.

Q. When, however, the bad provender has been continued a long time, the horse does not recover his wonted powers, even when the bowels again become regular.

A. As soon as these medicines have fully subsided, give the tonic medicines, with such a *tonic diet* as we were talking about yesterday. [Page 100.]

Q. Improper substances remaining long in the stomach necessarily spoil its power of digesting good food, long after the cause is removed. "Give him a run in the straw-yard," says the *Commercial Traveller*; being his favourite but ungrateful resource when the animal has finished a long and fatiguing

journey, and may not be required for a month or two, and this usually in winter time.

A. Blazon this among the many mistaken notions; when they likewise allow *no corn:* or rather say, "when they *give none*," as usually happens at the "straw-yards"—hateful name!

Q. Such road-horses generally return sadly indisposed—

A. Invariably so. The nature of *straw*, for long continuance—its entire want of *heart*, is incongenial to the stomach and bowels of the horse, by distending their capacity, and causing torpor and obstruction at the several *turns* (so many *sphincters*) of the bowels; besides that it makes poor blood by itself, and is little bettered by the ill-gotten *hay*, [See APPENDIX, *Hay*,] usually served out in farmers' yards, for horned cattle and working teams. The single crime of *the straw-yard*, is the unfaithful distribution of *corn*, which would tend to correct all other evils; and a couple of small feeds *per diem* will be found sufficient to effect this good. Then the sapient owner, upon *taking up*, has but to clap his property suddenly upon full diet, and the mischief is complete.

Q. After such meagre *keep* the famished animal must enjoy it much.

A. Aye, like other brutes, *over-much*. The horse usually comes up with blear eyes, a hectic cough, thin flanks, and thick heels, all which unfavourable symptoms do but increase upon the horse being thrown at once upon the full establishment of

corn and hay; the heat of the large stable he usually inhabits contributing its aid in confirming either complaint, if it do not add thereto *farcy* tumours, or else a running nose, which may, probably, degenerate into *glanders,* and *is so, if the running be confined to the* LEFT *nostril only.* ☞ If the *right* nostril runs at all, 'tis not *true glanders.*

Q. All which misfortunes might have been evaded by *a gradual return to his former habits,* as you recommended on a similar occasion.

CONVERSATION X.

Inflammatory Complaints. 1. *Of the Stomach and Bowels: influence the Kidneys and Liver. Colic and inflammatory Complaints—Jaundice, retention of Urine, Bladder—Adhesion.*

Q. In our previous conversations together, I observe you generally connect "the bowels" with whatever you remarked respecting the *stomach.* Considering *the organs of digestion* as performing an important office in the well-being of the horse, let me ask, are those two parts nearly connected in their functions?

A. Intimately so, when functional derangement occurs: in the process of digestion, however, *the stomach* itself scarcely does more than the office of

introducing the food to the more active organs—the *intestinal canal*. At one part, near the stomach, this *canal* suddenly enlarges to a capacity equal to the stomach, whither all drinks descend immediately on being swallowed, and remain until called for by the secretory organs, or by inflammation, which is performed by an *effusion* of watery particles, that is as well recognised as it is inscrutable: this part of the canal is called the blind gut, or *cæcum*, of which we were talking lately, (page 120);

Q. As a *second*, or auxiliary stomach. But, whatever be the functions of the blind gut, I happen to *know* that in the stomach the food remains long enough to undergo *a change*, at any rate.

A. Which it could not perform without drawing a supply of aqueous particles, as it does by effusion from this its counterpart, the *blind gut*. Besides all this, the stomach's chief purpose is the secretion of two distinct and very important *juices;* one whereof, with the descending saliva, is intended to defend its rough inner coat from the hard substances that are taken as food; the other is an acrid secretion, admirably calculated for reducing the food to an homogeneous pulp, well adapted for affording the blood-vessels fresh supplies.

Q. I can easily conceive how the cessation of those secretions at any time would cause the derangements of the inside we yesterday talked about, (p. 121,) and on a former occasion, (pp. 69, 118,) as I can, also, how *the chill*, whether internally or externally given, may occasion gripes and inflamma-

tion, or even sudden death may ensue; but tell me, are these different objects of attack, and degrees of virulence, on which *the books* lay so much stress, deserving of separate consideration; or, rather, do they require a different treatment when the virulence is the same?

A. Not to the extent insisted upon, nor with the nicety of distinction set up by some writers; though we certainly come at a better knowledge of *the degree of virulence* that is to be subdued, by ascertaining *the seat* of disease, or point first attacked.

Q. I thought so: one of the first writers going is of the same opinion with me.

A. I know of no "first writer," where all have done their best, and every one something worthy of being recorded. The bare saying was very insolent towards the profession, especially when uttered by a near relation of that *writer*; and you, you are the worthy echo of the general slander that sets up one before all others of his profession, trade, or business—as this is: he has committed blunders, too, like all other folks.*

Q. Me! I am sure I did but endeavour to do what you often taught me should be done in all such inquiries, namely, to simplify the matter, that we might sooner arrive at the truth.

A. With that I have no quarrel, though I dislike your sweeping authority; neither had I conceded

* See p. 433, of Hinds's Veterinary Surgeon, for the verification as to one point.

the point in dispute. For, 'tis most easy to perceive that, by ascertaining the organ whose functions thus cease and communicates its baleful influence around, we are enabled to prevent a recurrence in future, which I insist is no mean point gained in the practice of the curative art: Humanity says *yes*, with both hands extended.

Q. I cannot deny this: physiology would lose half its value without it.

A. Moreover, do we not find certain medicines act more speedily, more effectually, upon certain given parts than others? *Resinous* substances and *alkaline salts* upon the kidneys, for example; *calomel* on the liver, and so on; and shall we not employ those in preference which go at once to relieve the patient at the main seat of disorder?

Q. Allowed, sir; I confess I was partly wrong.

A. Say *mistaken*—that will do for me. There is something in the *form* of administering medicines, too, in all those internal disorders that lead to inflammation, which shall contribute its mite towards the cure—and every little is something in our extremities. *Balls* that speedily dissolve *may* afford the desired influence to the stomach in time; but purgatives in that form too frequently pass so far down before they begin to act, as to perpetrate further mischief at the *rectum*; a drench of the same materials begins to operate at the stomach, or in *its second*—the blind gut, immediately on passing down.

Q. I now perceive how inflammation of either

of the vital organs may be arrested in its terrible progress, by addressing our curatives to the seat of disorder, in its strong hold, at once.

A. Considering the many fine horses—indeed, *always the finest*, that are carried off in two or three days by abdominal inflammation, I really think we have achieved a very great good by saving one of those valuable days.

Q. I have known a horse in training to die in twenty-four hours, of inflammation *in the bowels*; in fact, every body on the turf knew the horse.

A. Of over-training, you mean; being fed too high, kept to strong work, and punished with repeated doses of physic, to counteract the effects of both: i. e. aloes, to the amount of an ounce or ten drachms,—sometimes much more. I know their mode of proceeding; something like the soldiers' mode of doing things, "*by force of arms.*" But you seem to know that this horse died of inflammation in this particular organ,—"the bowels," say you; this quite cuts up your former opinion as to generalising all internal inflammation whatever, eh?

Q. There was not time sufficient in that case for the inflammation to reach the other organs.

A. *There* you give up the whole point; but, by the way, the disorder *had reached one other organ* at the moment of its death, (its brain,) of which more anon. Meantime, I will also concede one point, which is this—make distinctions they who may, we are sometimes baffled in drawing con-

clusions upon one case out of another, as nature does much more for one animal than for another, and we are not always told whether one of the patients between whose two *cases* we endeavour to draw a parallel, had not been previously *abused with medicine*, (or purgatives, or cordials,) or by hard work, on turf or road; to say nothing of age, of breed, or of the *class* he might belong to, as we were talking of *yesterday* [vide page 114]. This latter consideration makes a vast difference in the operation of any given prescription. [See APPENDIX, *Physic*, section 3.]

Q. *Internal inflammation*, of whatsoever part, I conclude, communicates its baleful influence to another and another part, in exact accordance with the amount of the original attack, contiguity to its *seat*, and the previous disposition of the animal's constitution to acquire inflammation of every sort, whether of one particular organ or of *the whole system*.

A. This one maxim, however, may as well be repeated here from yesterday's conversation, and be always borne in mind, viz. that *the stomach* always feels the influence of every such *increased action* we call inflammation in any other organ, and very properly resents it by refusing food, which would but increase the disorder.

Q. *Off his feed*, as we express it, at the stables.

A. "Off his feed," to be sure. When the whole horse is affected all over, solids, skin, tongue,

hoof, head, we call it *fever*, or inflammatory fever, wherein great heat of these several parts, and of all the others, are found to have increased rapidly and ten-fold; *the blood*, which has been the vehicle for conveying all this mischief into these extremities, proves its participation by an increased pulsation, doubling its number of beats to eighty, or ninety, or one hundred strokes in a minute, and being extremely irregular. [See APPENDIX, *Pulse—Bleeding.*]

Q. You may feel it under the tongue, which is very hot, and the mouth becomes dry; the perspiration also ceases;

A. The supply of "aqueous particles," spoken of just now, (page 135,) being exhausted by the heat. From the same cause *costiveness* ensues, if it be not itself the original cause of all these unfavourable symptoms.

Q. The treatment proper for inflammation of the stomach and bowels is not very difficult, I apprehend?

A. The chief of your study should be, to mark any change of symptoms, or disparity, between what you have already seen and treated and the case in hand. After giving a bran-mash, bleeding speedily to a large amount, say four or five quarts, and then a purging-ball, amends a slight attack; a quiet stable, and close attention to the symptoms, are indispensable to completing the cure. If the bleeding has extended to faintness or staggering, give *opium*, to prevent the re-action

of the heart. Consult the long and accurate investigation of this whole series of disorders, in "The Veterinary Surgeon, by *John Hinds*," pages 159 to 193; the transcribing of thirty-five pages will not be time thrown away by you, though for my part I am too old to submit to the tameness of copying a single page of any body's book.

Q. Too proud, perhaps, sir; and a very becoming feeling, *in you*.

A. You do not promise me to study the subject as I recommend, therefore, go, call in *the doctor*, you have no other chance of saving your horse, unless the bleeding effects it.

Costiveness, or constipation, as was just remarked, I have reason to know, is an original disorder, brought on by high feeding, upon horses of tender insides, mostly; but all classes of horse being also liable to incur the same *hardness* of *dung*, by being kept upon dry food, (oats and hay, augmented by beans, threefold,) as race-horses must be while in training, at very strong exercise. The heat consequent upon galloping, clothing, and sweating, contributes to the disorder; which sometimes defeats the aloetic purge that is usually given to remove the one and the other, but which sometimes fails in producing the desired effect, and the animal is lost; unless the dose be repeated in an increased and ruinous ratio, so as to inflict a lasting and incurable irritability on the stomach, and a *tenderness* of the bowels that re-produces the same disorder

at some future period. A race-horse thus treated never again recovers his paces, his stretch, nor his lasting powers; a hunter, under the same circumstances, is one of the first to knock up, or the last to *be in*, if he ever come *in* at all.

Q. According to your former advice, we should reduce the heat "by opening the body" with purgative-balls.

A. Right. But these do not act quick enough in extreme cases of costiveness, when this has originated the disorder, and caused derangement of the head, and dropping down; as happens frequently to the high-fed waggon-breed we spoke of some time ago, (p. 68); the primary evacuation having been neglected, and the consequently *turbid urine* being treated with stupid indifference, they thus show the symptomatic effects of gross feeding, we then call vertigo, delirium, and megrims, or staggers, which, with better bred cattle, becomes *inflammation of the stomach and intestines* of the most dangerous description.

Q. Do you treat both classes of horses alike?

A. As to the last mentioned, I have already said *how?* But as to the heavy ones, being *down*, the *manual operation* (back-raking) must be performed at once, when the horse will try to rise; but keep him down, [a single hand upon the head effects this best,] and throw up a *warm clyster*, in quantity commensurate to the size of the animal. But as this is an application not always at hand of the most desirable kind, viz. the *laxative clyster*, employ

the second best (a sedative, as below) or the least effectual, namely simple warm water with a handful of common salt in it: but *give a clyster*, be it composed of what it may. [See APPENDIX, *Clyster, Camphor.*]

Q. Protrusion of the *anus* presents itself in bad cases, to some extent.

A. Then insert a bit of *camphor* (half an oz.) up the part, or dissolve it in the water or water-gruel whilst making ready, (what little *will dissolve,)* and apply the residue as directed. Give bran-mashes, as much as the patient will take, or some of the same gruel, *thin;* bleeding will be proper, as you may learn by consulting the pulsation [See APPENDIX], and, whether or not, the animal must be emptied by purgation. Give the purging-ball, No. 2, if the patient be very foul, as is usually the case.

Q. This treatment effects a cure, then?

A. If taken timeously in hand. But if not, and the animal be *whipped up*, and worked on, the cause of the disorder is thereby enhanced, though nature rights itself for the present, perhaps, by eliminating *part of the dung;* for the remainder, being absorbed up into the system, circulates in the blood, the sure harbinger of future disorder—if death do not more instructively intervene.

Q. Would you back-rake a *blood horse*, should his evacuations have been unfortunately neglected in the same manner?

A. I can scarcely suppose any one would be so unmindful of his duty; but rather than the hardened

fæces should remain a day, after the usual quantity of *aloes* might have defeated our expectations, I would remove the obnoxious obstruction by the hand, or rather the *arm* of one of our boys, taking especial care to file the corners of his nails, &c. &c.; for the intestines of this *first description* of horses are always irritable, if not tender; whereas your *fifth* order, which we have now mostly in view, might suffer nothing, though back-raked by their own waggoner.

Q. I remember me, once on a time, that your stables were all being purged, what anxiety marked your countenance when a certain strong robust horse, a favourite of yours, kept his physic in him up to the thirtieth hour, and no signs whatever even of dunging; no more than if the physic had taken a quite contrary effect: was not that a fit case for back-raking, pray?

A. No; not for so short a delay, nor for a day longer. 'Dare say, I gave a clyster, though?

Q. Nay, you did not. For about the time of *going out* in the afternoon, while the people went up to get one ready, your favourite produced a famous stool, also.

A. "All-so—o!" Don't be ridiculous.

Q. *Colic* more frequently attacks the intestines than *inflammation*, I apprehend; and if suffered to continue unchecked, terminates in the more severe affliction. At its commencement, and for a long time after, the pulse is not found to increase much; whereas *inflammation* is attended by quick pulse

and a sharp one, conformable to the acuteness of the attack. In *colic*, if we put on a blanket, or a sweater, and broad *girth* tight, the animal will feel relieved and take it quietly: if the pains be inflammatory, the patient will plunge, look sharp at his sides, lie down and jump up again quickly. This is one of the minor diseases that lead to a more serious one, and therefore the *causes* being known are easily avoided.

A. *Colic pains* are referable to several causes, varying from each other as the poles asunder. A *cold*, walking into a river after travelling, standing exposed to a current of air under the same circumstances, bad provender, musty oats, rick-burnt, coarse, or ill-got hay, bad water, and denial of a sufficiency; these are the forerunners of colic, gripes or fret in the great majority of cases, and all admit of remedy as they do of avoidance;

Q. But, when such dangers cannot be avoided, may well be met and counteracted by a cordial, I should think.

A. So should I; yet I would advise you to recollect all that was said respecting those same cordials at one of our earliest interviews. (Page 43, &c.) Give *laxatives*, however; and No. 2 being a warm one, is to be preferred. [Vide APPENDIX.]

Q. We should use cordials with moderation, I perceive, and only when indispensable; by which means the danger to be apprehended from inflammation being brought on by *colic* would be entirely obviated and done away with.

A. Perhaps you might, if no other *colic pains* afflicted the animal than those arising from the foregoing causes. But there still remains another species of attack, very difficult to manage, and almost incurable in slight cases—quite so in the more inveterate, and must be described as "caused by *adhesion*." If the horse is always found to perspire greatly after moderate exercise, and nothing else is known to be amiss with him, the sweating is brought on by internal pain, arising from the growing together of one organ or part to another. He is then termed *fretful*, is described as one that "sweats with the least extra work;" and though he goes a good pace for a short burst, race or stage (as the case may be), he does either in evident pain, whilst his whole frame shakes a long time after hard work. His appearance altogether bespeaks *colic* in its highest state, or inflammation of some vital organ; but all goes off again with a few hours' rest, and he becomes well for a time, or until the extra work is again required of him.

Inflamed kidneys is also evinced by symptoms resembling colic, in many respects; and so is *inflammatory adhesion of the lungs*, of which we shall come to speak at some future interview.* [*Conversations* xiv. and xv.]

* The seat of the disorder might be ascertained with considerable accuracy, if it could be brought to answer any practical good purpose. Adhesion of any portion of the organs of respiration to each other, or to the ribs, for example, which is the most frequent point of attack, shews itself by the horse's *distress of*

Q. This appears to me a cruel disorder.

A. And the more so, as 'tis usually treated amiss with *the cordials* and other heating mixtures, under the false idea that 'tis genuine colic pains, whereby they do but increase the evil, and pave the way for its return, until it terminates in extended inflammation of the most inveterate kind,—fatally, at last, by aridity of the whole frame, locked jaw, or apoplexy.

Q. What is the cure?

A. There is none for aged horses, long afflicted and repeatedly *brought down* by the extra work; though younger ones, in the worst cases, may be relieved by being allowed comparative rest, and a gradual return to ordinary work.

Q. What description of horses lie open mostly to a disorder of this nature?

A. All: all that are kept in-doors from season to season on dry food, and *stinted in their water*, are very liable to adhesion of the parts; the fluid secretions, I was speaking of just now, being thus denied the means of renewal, suffer exhaustion, when the heat that always prevails becomes inflammatory, which any little exciting cause may light up in its worst forms.

Q. *Inflammation of the bowels*, that is not pre-

wind coming on previous to the distress evinced by *sweating*; whilst, if the liver (at its lower extremity) adheres to the intestines, the horse sweats *before* he blows for wind. If the liver adhere to the diaphragm, the expirations of wind, even after walking exercise, will be slower than the inspirations.

ceded by *colic*, I begin to perceive, must frequently be owing to this cause; even the extreme *irritability* of the intestines which we know attends all blood horses by nature, and the stallions in particular (because of the contiguity of the organs of generation), together with the class of horses we deem to have *tender insides*, must undergo considerable exacerbation by reason of any such adhesion, however slight, diffused, or partial.

A. I have been thinking the same these twelve months past; as, also, that the term "peritonæal inflammation," which the doctors have conferred upon every such adhesion, (because of the *peritoneum*, or suspensor membrane of the bowels, being commonly affected,) is likely to lead us astray, as regards one species of adhesion, at any rate.

Q. This one is a sufficient exception to the general name: the treatment also differs, eh?

A. Undoubtedly it does: in all cases of adhesion, of whatever part it lays hold, mild exercise, for horses under *age*, does nearly all the good that can be hoped for: except in one species, and that is the attachment of a diseased liver to the intestines, usually at its lower extremity, and of the right lobe. When this happens, the horse sweats uncommonly, without any other assignable cause, previously to being blown by his exercise; and in this case he will require comparative rest a short time, for the ulcer that is then formed destroys so much of the gut as it adheres to; it then sloughs off into the intestinal canal, and goes away by evacuation.

Q. Why, there is a vast of difference indeed! The one species of this disorder requiring exercise, to bring about amelioration, in the other it would go near to kill the horse, I should think.

A. Nature does much in those cases. If left to himself, and the gut were to be closed entirely, I have reason for believing that a new passage would form of itself; but *man*, the sad creature, will exact severe services from his horse, and, not content with this infliction, further adds to his crime by giving cordials, under the mistaken idea that the animal suffers *colic*; whereas, a soft and *cooling regimen* is plainly marked out by the nature of the disease, as the only sane and reasonable course of treatment. If the body have a tendency to costiveness after this, give clysters of warm gruel with salts in it, or common *salt*.

Q. After this disorder, or any other of the like inflammatory nature, great weakness of the whole frame ensues, that requires all our skill and management to bring the horse out of; the medicines administered "to kill the disorder" (as they say) having relaxed the stomach and bowels, these are thereby disposed to contract *colic*, or even *inflammation*, from every trivial cause.

A. As you rightly observe—inflammation of the *lungs*, the *kidneys*, or *liver*, being cured, still leave behind the same weakness of the intestinal canal as does any functional derangement of this last-mentioned organ. The *cooling regimen* before spoken of repeatedly, and keeping the body gently open,

with walking exercise and good grooming, are those means; but we will speak more to this point when we come to talk of inflammation of the lungs and recovery from that particular ailment. [*Conversation* xiv.]

Colic, gripes or *fret*, (remember,) is of the same nature, though lower in degree, as inflammation of the intestines,—that is to say, the *mild* and the severe attack, arising from the same causes,—viz. a cold, a chill, exposure to harsh weather, unclothing a tender horse, as frequently spoken of before, and the remains of an old ill-cured attack.

Q. Sure! The *mild* by continuance becomes the *severe*, like unto most other febrile disorders.

A. As sure as fate. As happens, also, when the medical remedies for either are poured into the animal after the disorder has been subdued; those good for inflammation having a tendency to dispose the bowels to future access of colic, whilst those which *cure the colic*, do so by exciting the parts, and, therefore, if long persisted in, must predispose the bowels to acquire inflammation.

Q. The last-mentioned being only a little more tardy than the colic in this kind of reproduction. *Colic* is never fatal, I believe, unless terminating in inflammation.

A. Though very troublesome when the horse is liable to it frequently, which is the case with every horse that has been *physicked* a good deal, and that harshly; whilst one that has been *cordialed* much is liable to contract inflammation; until the stimu-

lant having died away, then would he acquire *colic* readily; or, in either case, torpor of the parts, insensibility, want of action, accompanied by loss of appetite, would defeat the powers of the best medicine that could be compounded by the art of man.

Q. The state of the ears is a good indication of the change, I think you said: *hot* in colic, *cold* in the inflammatory attack, wherever this latter might fix itself. As to the liver and kidneys, however, I mean to trouble you with a few questions to-morrow, perhaps. [See *Conversations* xi and xv.]

A. Much depends on the acuteness of the attack, and on the fulness of the animal's system at the time of its occurrence. Also, whether any such adhesion of the internal parts, about which we were lately talking, then existed, in a slight or severe degree, as this would tend to give even a trivial attack an unfavourable turn, according to its degree.* If no adhesion, then would a slight cold in

* Such appearances of adhesion in the animals sent for our sustenance are considered sufficient cause for rejection of the flesh thereof by the Jews and others; a defect that some one suggested is hereditary, but which we apprehend is mainly attributable to the water of certain districts, to seasons, to climate, and to the kind of land, the substratum whereof may have been bedded in some mineral or other—very frequently of manganese, small particles whereof are found on every land, giving a reddish tinge to vegetable productions that are otherwise green or white. The practice of offering up sacrifices of animals among the ancients, *to propitiate the gods*, as we are told, had more of state policy than of religion in the ceremony. The officiating persons were physicians as well as priests, and on occasion of settling a new colony, sought in this way to ascertain the healthiness of

the bowels appear in the form of *colic*; the symptoms whereof indicate lowness of system, and point out the propriety of employing cordials, whilst inflammation, on the contrary, demands a reduction of the already too great excitement.

Q. Your practice of feeling the pulse frequently would then stand you in good stead: you would soon detect the corresponding symptom, its acceleration, and inequality of the beats to indicate inflammation; as, also, whether acute or diffused, by its sharpness or its rigidity.

A. True; if the ears and legs turned cold at the same time with the paroxysms of pain coming on. If those parts (ears and legs) retained their natural warmth only, and the pulse fell lower than ordinary, I should then pronounce the pain evinced to be genuine colic to all intents and purposes, and give a cordial drench, No. 1 or 2, [See APPENDIX,] or the *white water*, No. 5, of a strength suitable to the urgency of the case, and throw up a clyster. Thus, if the animal were already purged, warm water might suffice; if extraordinarily so, I should add to it *camphor* three drachms, and insert at the *anus* what would not readily dissolve; though thin water-gruel would do better

the country before they began to build: the awe and reverence thus inspired, the wily rulers afterwards kept up by a repetition of the sacrifices from time to time, and demonstrated the anger of their gods by the animals dying in that disease which they termed *trifer*, whilst freedom from such adhesion received the name of *cocher*, or good.

in either case, save the time expended in making this according to my receipt, [See APPENDIX,] and suffering it to nearly cool again. Give drenches of the *white waters*, warm, as much as the patient will take freely.

Q. Purging comes on naturally, in some cases, but this happens mostly with ordinary cattle.

A. Which may then be considered an effort of nature to relieve the body of some offensive matter, and nought more is requisite than giving thick oat-meal-gruel in abundance. On the contrary, you will but deceive yourself if you expect your horse to put up flesh sufficient to strengthen his muscular action whilst he fails to dung in *form*; and you may ascertain when this desirable object has been completely attained by the firmness of his fleshy parts, the springiness and re-action of any pressure upon the buttocks, shoulders, flanks, &c.

Q. At the *mane* we employ the same test: when this is firm, and not readily loosened by a shake of one's hand, we need not doubt of the horse being in health, and of strength sufficient for his work, be that what it may.

CONVERSATION XI.

Internal Inflammation, continued: Diseases of the Urinary Organs; the Kidneys and Liver —the Bladder, incontinence of Urine and suppression thereof: Stone.

Q. The same change from warm to cold legs and ears we lately spoke of takes place in all internal inflammation, I believe?

A. And of the *kidneys* and *liver* as much as any other organ; these being engaged in the function of separating from the blood those humours that are known to us as the principle of *urea*, and the principle of *bile*, without which process the blood would be unfit for further circulation.

Q. But it follows, when these organs do not perform their functions by reason of torpor or inaction, that the blood cannot be so cleared of those offensive humours, and circulates injuriously.

A. Then may we pronounce that the horse "has the humours," as I observed to you upon a former occasion (page 74). You state the thing correctly as to the injurious nature of the blood, the vital fluid, when unrefined; but what must be its state when the *kidneys* or the *liver*, being excited to over-action, or, on the other hand, obstructed, imparts this evil feeling to the blood, in addition to its own previous foulness?

Q. The bare reflection on this subject is appalling.

A. The existence of inflammation at the kidneys is further known by the urine coming off high-coloured and small. Symptoms very similar to inflammatory colic pains likewise attend an affection of the kidneys, from the contiguity of these with the bowels, principally; but the real seat of the disorder may be ascertained, with sufficient accuracy, by passing the hand over the region of the kidneys, when the animal will evince signs of tenderness there, which becomes extremely acute, if not checked in time.

In this and all cases of inflammation, bleed to an amount commensurate to the disease: if the pain be acute, the pulse quick, sharp, and irregular, let the bleeding be promptly performed, in quantity three or four quarts, at least. If the pain and the pulse do not decline their irritation, the bleeding must be repeated. [See APPENDIX, *Pulse.*]

Q. Whatever ails the kidneys, they cease to secrete the urine *regularly*, at times without being sore; should we not then give diuretics, or p——g balls, as they are called?

A. Don't be vulgar; nor lead people astray. When the kidneys are not *sore* (as you term it), or inflamed, the ears being also of their usual warmth, the urine will come off of its natural colour, and the obstruction to staling then lies at the *neck of the bladder* only. This has been occasioned by the gut being distended with hard dung, and in this state pressing upon the ureters and *neck*

of the bladder, the water cannot pass, but is taken up or absorbed into the system again, and thus becomes the harbinger of grease, of dropsy, of tumours, and other disorders that depend on a depravation of the blood. If the retention has lasted long, and the danger thus become imminent, give a laxative clyster, or a dose of castor oil (12 ounces), and conclude with a brisk purgative-ball that will empty the great gut. [See APPENDIX, *Physic*, No. 3.]

Q. Inflammation of the intestines extends its influence to the *liver*, does it not?

A. It does, notwithstanding some attempts to deny that this organ is susceptible of inflammation; leaving there, also, some of its baleful effects, after the bowels may be pronounced *completely* cured; for the blood, which has been accelerated by the heat, in its passage through the liver to be refined, leaves a portion of its heat behind, each time more and more; this increases the viscidity of the bile, until the vessel *(duct)* that conveys it to the bowels is choked up—an obstruction that is not always removed along with the original disorder. The consequence whereof is constipation, and the return of the bile into the circulation: if the attack be a slight one, *jaundice* ensues; if severe, then *inflammation* of this very delicate organ takes place. But, with a view to prevent the fixing a tedious and troublesome disorder on the animal, we should ascertain the fact *before* the yellows appear at the eyes or in the dung; and, as

enlargement of the liver always attends such an accession of heat there, this scrutiny cannot deceive us. By the way, hot stables produce the same symptom of enlargement, as may be ascertained any morning, by passing the hand over the region of the liver, and it will be found most palpable on the off-side, at the last rib.

Q. On finding the liver so diseased, you bleed?

A. Not for the minor attack; because this proves that the poverty of the blood is already the cause of derangement. But for inflammation of the liver, we do bleed (as in all other cases of inflammation), according to the degree of pain and sharpness of the pulse, as I observed yesterday; taking the precautive to give bran-mashes to soften the contents of the inside, as costiveness always attends denial of bile to the bowels; or give a pint of castor oil, instead, if more readily procured. After *the operation* the patient must have *physic:* but instead of a purgative, as usual, give now an alterative laxative, No. 2, of that class of medicines in APPENDIX, because *calomel* addresses itself to the liver. If the enlargement do not subside with the bleeding, rub the sides of the patient extensively with the *blistering ointment.* [See APPENDIX for this.]

Q. The liver is liable to adhesion and other disorders, I think you said before?

A. To schirrous tumour also; when we come to talk of the organs of respiration, I shall take occasion to shew how the liver adheres to the midriff.

Q. The urine is an important evacuation, regarded as one means of bringing the horse into condition. The *bladder* is the chief of these organs, is it not? Nay, do not shake your venerable locks at me: it is, at any rate, the most obvious—

A. Not until an after-death examination takes place. As for "the most obvious," *to the sight*, this is the orifice of expulsion; to *the touch*, the kidneys are the most obvious of those organs; they are likewise the most *active*; but the ureters, two longish tubes, which take their origin at the centre of each kidney respectively, and communicate from these to the bladder, are no less important, whilst the bladder is little better than the depository of the urine.

Q. Yet several disorders, as retention of urine, bloody urine, excessive staling, &c. &c. are ascribable to *the bladder*, of course.

A. Not *of course*. Quite a vulgar error, be assured, and one not the less to be deprecated, because so generally believed; but much better informed persons than you are every day falling into the same mistake.*

Q. What, then, are the disorders of *the bladder?*

A. None, that we know of for a certainty, or could

* Since the text was written, it becomes me to observe, that the admired periodicalist, *Nimrod*, in copying a passage from my volume, "the Veterinary Surgeon," falls into the like error prepense; instead of my phrase "urinary organs," having substituted the vulgo—*bladder*, to the utter derangement of the sense. This is one of the passages he fails to acknowledge. Aug. 2, 1828. J. HINDS.

divine upon dissection; palsy of the bladder (inaction, torpor, insensibility) being of doubtful existence; the grand disorder and final one, a rupture of the fundus, and immediate death, being the fault of *the neck* becoming suddenly collapsed, while the kidneys continue their healthy action of sending down a full quantity of urine, and the animal is worked on, without being allowed to stale, until at length it is incapable of straitening the neck of the bladder by the usual natural efforts, and the bladder bursts.

Q. On such occasions you set *the neck* to rights by introducing a small hand at the *rectum*, and smoothing it forwards with the balls of the fingers.

A. An operation that is more easily performed on the mare than the horse. At times we meet with an obstruction at the neck, of quite another nature than collapsion amounts to; a choking up, by the coming down there of some concretion of earthy or stony particles, and consequent "suppression of the urine." But even the presence of stone within it must not be wholly ascribed to the bladder, as all such concretions commence higher up, namely, in the *cæcum*, and the *kidneys*; and are oftener found there, and in *one* of the *ureters*, than in the bladder itself; to which they descend by the united powers of gravitation and efforts at expulsion, and get entangled in the membranous processes of the *inner coat* of the bladder.

Q. Although speaking so lately pretty much at large respecting abdominal inflammation, I must

return to that topic once more to observe that, although not originally affected, the urinary passages seem to retain the influence of such disorders long after these appear to have been cured.

A. "Imperfectly cured," you mean; or the curative process carried on with so much injudicious violence as to leave weakness, and dregs of the disorder, that seek to pass off *by urine;* but the kidneys (you mistake) having been already compelled to accelerated action by the contiguity of inflammation, and quite neglected at its termination, now perform their function of secreting urine defectively, or with so much labour as to wear out that function. The evil thus begun, goes on with various fluctuations and changes, from one extreme to another, that are commonly exacerbated by the ill-judged practice of giving *diuretic medicines,* which stimulate to exertion but to destroy; whereas, the disease already consists of a disposition to secrete *too much* water; the "retention of urine" being no defect in quantity, though it certainly is in the *coming off.*

Q. You lately described this species of ailment and its remedy, as "*suppression* of urine."

A. I see no difference in the distinction you attempt to draw; though I am free to allow that *suppression* of the power to secrete any, is one thing; it is quite another when the urine *is secreted* and *retained* until it be absorbed in the system, or else rupture the bottom of the bladder.

Q. I am quite content with myself, when I can cope with you in any way, however trivial.

A. Pray note, that the kidneys suffer a long while before they refuse to perform their office of secreting the urine—even for years; and then their incapacity is denoted by blood coming off with the water. This is "bloody urine" in the veterinary practice.

Q. The kidneys are then said to be "rotten."

A. And are so, in reality; but the *immediate cause* is hard work. When the *region of the kidneys* being strained, at *the heavy drag*, for example, parts with small portions of the blood that it is their office to refine from the principle of *urea*, as before described; but which office having ceased, you will perceive the utter ridiculousness of giving diuretic medicines in such a case, and thereby stimulating these delicate organs to an accelerated performance of a health-giving office whilst in a disordered state.

Q. Rest and a cooling regimen, do all that can be hoped for, in this, as in all other ill-cured inflammatory cases.

A. For this reason, among others: as *green food* and *soft food* cool the kidneys, these secrete urine by a very different kind of action from what they are called on to perform, when this evacuation has been caused by the stimulation of medical diuretics. Whereas the green food (grasses, vetches, carrots) may be considered *natural diuretics*, such as the horse would take if allowed to run at large. [See *Cooling Regimen*, in APPENDIX.]

Q. *Excessive staling*, I take to arise from weak-

ness of the bladder, and consequent inability to retain the urine, which is thereby called for in greater quantity.

A. Occasioned by the absence of its *mucous defence*; which has been exhausted by the action of great quantities of stimulating *diuretic medicines*,* employed in curing some recent inflammatory disorder, added to the poverty of the blood.

"Incontinence of urine" is the same disorder, with a less discharge of urine, but often, and affecting the neck of the bladder, chiefly.

Q. These appear to be diseases of the *poor man's stable*. I take the remedy to consist of *better living*; more oats, green fodder, sodden corn, malt-mashes, oat-gruel, and gentle exercise.

A. Should the pulse increase, when either of those disorders may come on, (as happens with higher fed cattle,) give the *fever-powders*; and *after* this symptom is reduced to the natural beats, give *tonics*. [Vide APPENDIX.] If the feverish state of the pulse does not subside, continue the fever-powder: give also the cooling decoction, and administer clysters of water-gruel two or three times in the day. When costiveness comes on, as will fre-

* In making his remarks on the variance in *colour* of the urine expelled after giving *medicinal diuretics*, and that which comes off after the *natural diuretics*, the *close observer* may draw a tolerably safe conclusion as to the mode in which either acts upon the same organ; the first or medicinal being high coloured, the effect of over action, the natural is low coloured: the *modus operandi* of those resinous and alkaline substances upon the kidneys is explained elsewhere. [See INDEX, *Kidneys*.]

quently happen on this change of living, do not give purgatives, nor diuretics—nor soapy or resinous substances; but cease to administer all other medicines, and give a drachm or a drachm and a half of the unmixed *aloes* per day, until the horse has a soft stool, which will take place when the patient has taken the quantity that usually operates *as a purge*. For the mode of casting aloes, see APPENDIX, under "*Aloes*, sections 7—9."

CONVERSATION XII.

The Lungs;—Wind-Pipe and Midriff: a Cold, Catarrhal Inflammation; Broken Wind, Roaring; Law Suits.

Q. To this moment, neither of us has said a word about *the organs of respiration*, although we know how indispensable the well-being of these are to bringing a horse into *going condition*: unless these be in the best possible state, he cannot run any, and is often beat at a pinch for want of "a little more *command* of wind," to bring him through.

A. I beg your pardon there: we may not have mentioned those organs *by name*; but how often have we not brought them on the carpet, in one respect or another, as "the lungs," and sometimes by inference. 1st. As depending for goodness on

the conformation, or shape of the chest, (page 4.) 2d. As suffering from weakly nature or tender rearing, (page 32.) 3d. As requiring much care upon the *turn out* to grass, as well as attention upon *taking up*, (page 54.) 4th. As to obstruction by much feeding (page 79) impeding the respiration; and *lastly*, the injuries of which they are susceptible in training, (page 63,) their great action, (page 86,) and the galling pains of which they are the victims, (pages 25 and 146)—all these have not been forgotten, nor mentioned out of place.

Q. True, true. We did well to postpone more particular inquiry hereon, to this moment, perhaps. The windpipe and the midriff should also enter into our consideration of the organs of respiration I now observe, of which they form an efficient and very material part.

A. The distance to which the two extend being above two-thirds the length of the whole animal, though the two lobes of the lungs occupy a very great lateral space between them—whilst they are inflated; whence it is that this term (lungs) is so generally used for the collective organs of *respiration:* a function, by the way, that is composed of two actions—viz. *inspiration* and *expiration*, and that horse which performs this double function by the longest and strongest action is the greatest laster and surest goer, though he may not, at the same time, possess so much of the *go-away* quality.

Q. *Fine in the wind*, depends greatly upon the re-action of the muscles between the ribs, you

ay, (page 63): the racer appears to tax his lungs o the utmost when these muscles of the ribs are well braced.

A. That is to say, nervous, vigorous, elastic, trong—these are your qualities for *going away*. Then it is that "his wind brings him through the piece in style," if you please; and with good reason—the lungs being composed of fine cell-like membrane, as is also every muscular fibre of his flesh, however minute, an intimate and instantaneous communication exists by these means between the lungs and all other parts throughout the whole frame; so that health or ailment of the lungs will influence the entire body to such an extent, that these being suddenly "touched" or *broken*, in a manner or in fact, the horse then declines his pace, or trips, falls or breaks down, according to the amount of injury and the *kind* of attack his lungs sustains.

Q. Something much to the purpose was mentioned by you, two days ago, and at our second meeting, concerning this companionship—of the feet with the internal parts of the animal, behind as well as before.

A. Faulty pace frequently depends upon faulty lungs; *founder* always upon *inflammation* of those very communicative organs; by which we learn that this communication between the fore-feet and lungs is reciprocal, each influencing the other, both partaking the ailments of the other.

Q. A horse that snorts and wheezes, and coughs

only with great exertion—as if the lining of his *pipe* were hanging loose within side it, appears to fill his skin out at each effort. Animals unfurnished with lungs, as birds, are reported, by 'the great Naturalist,' to supply this defect by retaining air in certain other receptacles—the quills of their feathers being apparently the cavities into which it passes incontinently.

A. This drives it within the cellular membrane I spoke of just now; the wind being hereby forced from the lungs all over the body; and as it makes its way underneath the thin membrane that lines the throat (of either pipe), it there lies concealed, or sinks back towards the lungs, liable to renewal—we know not whether; until some uncommon exertion of the sufferer again drives the wind the same way to the upper part of the throat, and there narrowing the passage by distending the membrane, the horse then becomes a *roarer*,* notwithstanding the dealer's arts sometimes effect a *temporary cure*, and he sells or foists off his beast as a sound one.

Q. Horses so affected slightly, can perform a given distance *per day* for years, or go a certain

* After awhile a fluid matter is secreted in the cavity thus formed, which hardens, and the horse is then said to be "a confirmed roarer;" but when the enlargement of the membrane is more extended, the sound issued upon his being put upon his best paces is shriller, and he is then termed "a whistler;" but, when the air has been driven higher up, to the membrane that lines the nose, (where is also the secretory seat of glanderous matter,) he acquires the title of "a trumpeter, or high blower."

pace—say eight miles an hour, and perform it tolerably well; but if you put them out beyond their pace, a mile or two, "it soon finds them out" for confirmed roarers, that scarcely any thing can alleviate, nothing cure.

A. In this remark you develope the groundwork of many an action at law concerning alleged unsound horses.

Q. And reconcile some apparently contradictory oaths of persons whose characters may not be otherwise impugned with sinfulness—of this particular cast. "Drive that horse no more than seven miles an hour, for he can't bear no more," says an owner to his "boys;" and he knows by the symptoms of distress at *coming home* when his commands have been exceeded, and *by how much*, too, pretty nigh. Then, in the event of "finding a customer," he himself prepares a temporary remedy in a feed of oats steeped in chamber-lye,* and sells the afflicted horse at a price that, by its largeness, implies warranty. Hence arises *good cause* of action at law; his pockets get properly squeezed by the attorney, and all his yard get buffetted by the counsel, admonished by the judge, and disbelieved by the jury.

A. Ha! ha! ha! Good; curst good; very

* How the *grinding* of this medley is performed I can only guess, never having ministered to such a nauseating practice; but apprehend that the saline quality of it drains off much saliva, and the swallowing takes place by *gulphs*, as all animals swallow sophisticated food, or the doubtfully agreeable prescription.

good, *for you*, my fine fellow; why, this "*opening up* of a horse-cause" is admirable, and no sophistry either.

Q. Some doctors talk of making an incision in the wind-pipe, where the seat of disorder lies, and thus apply the remedy.

A. Calling it *bronchotomy*; and I once saw the operation performed with success, in a case of an obstinately ulcered sore throat; though this might have been cured at an earlier stage of the disorder by the application of *camphoretted spirits* to the throat.

Q. Blistering the throats of roarers is efficacious, is it not?

A. You have but to make sure of the spot, of which there is little difficulty, on which it has fixed, and you cannot fail. This fact may be known by passing the hand down over the throat repeatedly, where the point of obstruction may be ascertained —usually at throat-apple, by the animal then flinching a little, though he does so with signs of more acute pain when it is *ulceration* that has taken place.

Q. *Sore throat* is one of the early symptoms of catarrh, which we this day set out with investigating; *roaring* proceeds of an old neglected cough, I think you said?

A. Nearly always. Much depends upon the state of relaxation in which the membrane of the pipe may be at the time of a hard fit of coughing, and the obstruction in this case usually becomes

an induration of the lymph which has been secreted within the membrane, as I before described, as being brought about by *heat*.

Q. Which, if recent, you can relieve by blistering.

A. If at all. But the further signs of malignant sore throat, besides flinching from the touch, are sluggishness, ears and legs cold, appetite gone, shivering, with unequal breathing, and cough *suppressed*. Those symptoms come on rapidly with horses in good keep; slower with those out of condition; ordinary cattle, or husbandry horses, seldom contract the ulcered throat.

Q. 'Tis not, I perceive, a disease of the poor man's stable. Sometimes the soreness, instead of being at the throat, is felt at the glands under the jaw.

A. Which swell. If tardy in coming forward, let these be speedily treated with the camphoretted spirits, and kept *warm*, but not too *hot*, as frequently is done; but if this, with physic, does not reduce them readily, change your plan; apply a bran poultice to bring them forward, and, in the event of matter forming, continue this plan until the swelling breaks and discharges *the matter*, an event you may accelerate by touching the point of the swelling with a lancet, to about one-third of its extent, downwards. Express the matter completely, and dress with *digestive ointment*.

Q. As in the former case, the patient loses his cough when the glands swell.

A. Because the inflammation having fixed itself on a certain circumscribed space, the effect is less diffused, and, not further titillating the membrane, the cough ceases.

Q. Bran poultice to the neck is very difficult to retain, although they employ the bandage of *eight corners*, each having a tape fastening to pass over the forehead, the neck, and at the girth.

A. Steam the head, then, over a bran-mash, placing the pail in a larger vessel, capable of receiving fresh supplies of hot water. The *cooling regimen*, with green food, will complete the cure.

CONVERSATION XIII.

Cough.

Q. *Broken wind* is of several other kinds, you said; which be they?

A. Scarcely worth our inquiry, because we cannot tell with precision till 'tis too late, whether the particular misfortune has been occasioned by the cellular conformation of *the lungs* having burst into each other by excessive exertion, in which case the expirations of the *wind* are quicker than the inspirations; or whether the two branches, into which the wind-pipe divides at its lower extremity, are affected at their conjunction (producing *thick wind*),

or at their entering the right and left lobe of the lungs; when the respiration is *difficult* both ways, the sound hollow, sepulchral, long in coming, and indistinct, the chest never being properly filled out, nor the flanks working in unison. In all these cases the wind also partially enters the cellular membrane of the solids; as we find, upon any such animals being hunted to death, or slain soon after great exertions, the cellular construction much more apparent than in those others which die quietly, and at once.

Q. Exceedingly curious, and very instructive; but, for my part, I should rather know how to arrest the progress of *a cough* or catarrh at its *first coming on*, than learn in what precise manner it had fixed itself on any given part of those organs, unless some practical good would accrue to me out of that knowledge.

A. The most we can expect from it would be, to know when to alleviate the pain, by employing the sufferer in some less trying and ignoble labour—which you will tell me is beneath our notice.

Q. At present, at present. *The cough* first, then the more acute inflammation of those organs wherever it may fix itself; the causes, means of prevention, and mode of cure, will be more desirable information to me, because more practically serviceable in my present pursuits.

A. All cough differs in its tone, length, and force, according as the disorder may be seated lower down or otherwise, but the remedies differ ought, only inasmuch as it may have lasted long,

or be of greater or less amount; which should giv cause for apprehending it might end in inflamma tion, or consumption.

Q. Or, it seems, that the animal will at leas contract *broken wind*, by its continuance.

A. Cough, and inflammation of the lungs, are but two degrees of the same species of attack, both being the effect of *a cold*, chill or check, given to *the chest* externally or by inhalation, or else arriving by means of *the feet*, when either the one or the other has been laid open to that kind of infliction by being exposed to cold winds, cold water, or severe weather, at a time of *great bodily excitement*.

Q. Brought on by excessive work and stimulating keep.

A. As well as recent illness of any sort, with strength scarcely recovered; also a certain tenderness superinduced by hot stabling, warm clothing, and long use of warmed water during any inflammatory complaint.

Q. We may safely conclude the patient's illness to have been *inflammatory*, or at the least of a feverish nature, as according to your doctoring his complaints all hinge upon excessive heat.

A. Which includes, of course, its converse—excess of cold whilst the animal is in a high state of excitement, whether of work, or mode of living A horse long *kept up*, with full feed, is little adapted to a five mile *burst* of a cold sleety damp morning, though that were down the wind; and less so

when shortly afterwards it happens that the patience of the *three parties* to a chase is pretty well tested in finding a fresh fox in the wind's eye, with the glass at *Zero*.

Q. Or a couple of mail leaders, worth a brace of hundreds, after a ten-mile full-tilt stage, standing still to set down passengers, with wind and weather *ditto:* then it is the lungs go to wreck.

A. Rather say, "the organs of respiration," for it needs no witch to tell us, that the diaphragm is now mainly engaged in "recovering second wind."

Q. And when your hunter, stager, or roadster, does *come in* under those circumstances—*pop!* he goes into a stable already robbed of its air by too many inmates; unless, as you remarked the other day, he draws back at the doorway, "as if prescient of the ills that await him within." It was finely said, and justly too, according to my way of thinking.

A. Another of the mistaken notions, that lay open the horse to *catch cold*, is the practice of *keeping it clothed* constantly, and that in *woollen*, whereby the insensible perspiration, the most subtle of all the evacuations, is kept in and taken up again by absorption into *the system*, to fill it with the *humours* which ought to have flown off and mixed with the atmosphere: costiveness also ensues, that enemy to prime action! This course of proceeding occasions the complete relaxation of one portion of the internal organs before another, whether those of

respiration or of *digestion*, that part being soonest affected which suffers under the highest state of excitement—which in this case is generally the lungs. Thus the membranous lining of the nostrils, windpipe and branches, first in order, then the lobes of the lungs partially, leaving the midriff to recover *its tone* as it may: a "cold in the head," and consequent running at the nostrils, is never brought on in any other way than this leading the animal into an already warm, hot stable. Next day after the attack, if an inveterate inflammation does not take place, nor the nostrils run, a scattered, diffused cough comes on, that is commonly slighted.

Q. Now, as the latter being neglected produces the former, whilst an ill-cured inflammation leaves behind it a tedious hectic, we thence term "chronic cough," which is itself the harbinger of future inflammatory affections, *and so on*—I should like to know the earliest remedy I ought to employ, that prompt measures may be taken to stop the evil, upon the principle of a "stitch in time," &c.

A. All cough is inflammatory, a little; or, it may be severe, and yet confined to a small space, as at the *larynx* or throat apple, where certain brutes "cough the horse," upon making their purchase.

Q. And thus injure the part, so as to render the horse liable to contract future disorder there,

A. Permanently. I have examined the throat of a dead horse which retained the mark of the finger

and thumb of one of those *coughers*, quite plain: it had been a horse of good price at one time of day, and was a prepense roarer.* The audible symptoms of a sharp but circumscribed attack on this upper part of the wind pipe is frequent short coughing, with a trivial discharge of the secretion each time; both which increase as the disorder is allowed to linger unattended to whilst the horse is still worked on, from day to day, until it has crept down towards the lungs and appears to have exhausted the secretion—for none comes forth.

Q. But the cough becomes worse if nothing be done, and that in proportion as the subject of attack may be pretty well conditioned, fleshy, or tolerably full of blood.

A. When also *the pulse*, which may not hitherto have materially changed, is found exceedingly irregular and full, which further increases, as well as its quickness, as the inflammation lays hold of the vitals, which they term the pulmonary action. If the patient should have failed in the necessary *evacuations*, these are to be attended to, assiduously, and *the main one* opened by the purgative-ball No. 1; which is frequently found to reduce the symptoms of a mild attack with very little further treatment.

* At Tattersall's sales this practice is disallowed, to the great chagrin of some newcomers; but we have seen a horse "coughed" by half a dozen of those *coughers* at other Repositories, without rebuke.

Q. Still keeping in view well-conditioned horses, would you not bleed in the first instance; for this, I understood, was your practice in all *inflammatory complaints* whatever?

A. Assuredly; only taking care that inflammation be well marked ere I resolve upon that step, on the former principle laid down by me, of not resorting to extreme remedies until the evil to be removed *is an extreme one*. Vulgar horses, that are too well fed for their *breed*, cough through mere repletion, when their work is easy; a *half bred*, upon being exercised too abruptly, does the same; the first require bleeding, the second does not; unless he be too fat for his work, whereby one point of his "conditioning" has outstripped another: as they have neglected to keep pace in food and exercise, he, too, requires bleeding *in the first instance*, as you justly say.

Q. Then, sir, as to the thorough-breds?

A. As they never *cough* through fullness of the system, like the foregoing, some *injury* must have been sustained in the organs of respiration, when such a horse, *in training*, coughs any whatever. If it come on after ordinary exercise, or none at all, catarrhal inflammation has commenced; which may more certainly be relied upon when the pulse is found to have been affected by increased action, or disordered action, or both united.

Q. Then must you not bleed?

A. Then you must inevitably bleed, as in the

former cases, to the amount of two or three quarts, with a repetition, if the first bleeding effect no marked alteration within twelve hours.

Q. But it frequently happens that colts in training, when put to their best *speed*, and, for the first time, to the full *length* of their powers, say a mile and a half for three-year olds, cough upon coming in, repeatedly and violently, in the most alarming manner.

A. Occasioned by the virgin distension of the organs of respiration, now newly brought into play.* The circumstance ought to give no uneasiness to the training-groom, however, the parts which have been so strained by the *trial* soon recover their *soundness*, by moderating the exercises.

Q. When this *cough* comes over a young horse in training, does it not prove he has been put to too high a test of his powers; that is to say, more than he could achieve for his *time of life?*

A. Right! His capability of *going*, or his strength, have been estimated too highly—overmarked.

Q. And ought not to have been tried to their utmost for a year or two more, say four or five years old. Our best racers of the old time, upon whose performances we look back with admiration bordering on astonishment, never made their appearance on the Turf until *full-grown*, though they are not reported to us as being bigger

* How this takes place may be learnt, with instructive minuteness, by the curious reader turning to *my* "Veterinary Surgeon," pages 81–99.—J. Hinds.

than our modern cattle; all which proves that we of the present day do not fail so much through deficiency of strength of limb as for want of due maturation in the organs of respiration; which being thus *prematurely* taxed to their utmost, lose their elasticity, or further acquire some one or other of those evils mentioned in our Conversation of yesterday.

A. As to this question of running horses too young, we may justify it by the custom of the Arabs, who gallop their foals at the mother's side, from the very earliest age, in their predatory movements from one place of encampment to another, without injury, if not with advantage to the younkers.

Q. True; but they travel *in hand* until full-grown—a consummation that arrives earlier than in this country. Might we not deduce from this fact the inestimable advantages of rearing racers to run their utmost speed after their mothers, whilst they are yet suckers, and continuing the exercise (increasing it) up to the hour of taking them into training for the course.

A. Training them *by the stomach*, as 'twere, or natural desire. The mares might also be superinduced to run for each feed of corn daily, as fast as *her love of kind* would permit her to leave the foal behind her. What think you of the scheme?

Q. Well; but *the cough*, the cough, and *the bleeding*, with a repetition of this primal remedy, about which we were talking?

A. Seldom required, if the first operation has been duly performed. That is to say, apportioning the *quantity* to the irregularity of the pulse; and, according to the height of the pulse, so let the bigness of the orifice be.

Q. Hereupon the horse parts with his cough, all at once, sometimes; at least, as soon as the physic which follows the bleeding begins to operate.

A. By reason of the effusion of water in the chest, which then seems to have soothed the parts affected, and lowered the inflammatory tone of the whole system.

We know when this effusion has taken place, by a visible remission of the symptoms; *the ears*, which are always cold in inflammation of every kind, resume their warmth; the cough subsides; and the patient, though hitherto languid, looks about him as if for *a feed*, which he may now be indulged in, moderately, of bruised oats. Then continue the cooling regimen awhile [see APPENDIX], until the cure is complete, and bring round the patient to his original food and exercise by gentle means, similar to those employed when he came fresh to your hands.

Q. *A "cold in the head"* sometimes begins the complaint by a running at the nose, very much resembling glanders, preceding *the cough*.

A. But with this special distinction, *viz.* that the running in this case comes from *both* nostrils, whereas one only, and that *the left* nostril, is

found to run in the true glanders—when the gland also adheres to the left jaw.

Q. A distinction this that is worth a hundred—

A. *Horses' lives*, you meant to say.

Q. Rheum from the eyes accompanies a *cold in the head.*

A. Which leaves as the disorder creeps downward, as 'tis wont to do.

Q. So, when the cough has continued a long time, the discharge by the nostrils also ceases.

A. That is to say, in other words, the inflammation having increased, and with it the consumption of the watery particles in that region, the heat thickens the membrane that lines alike the nostrils and wind-pipe, and its power of secretion ceases. As the disorder proceeds down towards the lungs, the demand for the watery particles is still further augmented, until no discharge whatever comes off.

Q. Then I observe the cough becomes more troublesome than before: 'tis a pity the discharge should cease in this manner.

A. It may be restored, in some measure, by the use of the *expectorants* [see APPENDIX], which lower the inflammation, and enables the disorder to run itself off. Keep down the system by *purgatives* that operate on the water also [see APPENDIX, No. 1 and 2,] together with sweating-powders [see APPENDIX], as the patient may seem to stand in need of either the one or the other.

Q. But animals in *fat condition*, or which were *fleshy* previous to the bleeding and physicking,

frequently make efforts to bring off the mucous secretion that they cannot accomplish without great fatigue, and then imperfectly.

A. In this event, soften the agglutination by giving the acetous drench No. 1 and 2 [see APPENDIX], still look to his dungings and urine, and give alterative laxatives to meet any cessation in either way.

Q. Mercy on us! What a number of prescriptions. This practice is at variance quite with your usual doctrine. Surely they would not *all* be requisite?

A. Not for the same animal, except under different circumstances. But "disorders of the lungs" are of so variable a nature, that seldom are two animals, though of the same class and description—nay, even making part of the same *set*, attacked in the same manner, whilst the symptoms change about most unaccountably in the same individual at times; so that we do well to face about, not only in conformity with that change, but with the hope that one remedy may aid another.

Q. Still I do not see how you reconcile the seeming contrariety.

A. Thus. As to the last point, for example, *the dunging*, be it remembered that the strong efforts at expulsing the wind, which *the cough* occasions the animal to make, always affect the *state of the bowels*; besides that, when the disorder continues obstinately to baffle our endeavours, the patient devolves into a crib-biter, gnaws the wall

or eats his litter, with other evil propensities, the effects of the pain he endures. Hence the defective produce of saliva, and the consequent ill state of the stomach and its dependencies, (see p. 114, 128,) which induce the horse to swallow his corn whole, or *quid* his hay. Either vice being replete with danger to the intestines, as I dilated upon in our *tenth* Conversation, p. 131, 153.

Q. *Constitutional cough.*—Is this notion well founded, or is it one of the fancies?

A. Well or ill, of this we may be sure, that some animals cough only upon high feeding, without other cause, notwithstanding the three evacuations may be in proper trim; or at least when the exercise may not be commensurate with the *feeding*, as before observed, (page 61.) A certain looseness of the membranous lining of the windpipe, some assert to be hereditary; the secretion of fatty substances therein, or a disposition to *plethora*, or fulness of habit, causes the blood to stagnate in the finer vessels that line the throat, and there produces that titillation which ends in a queer kind of cough they call "constitutional," in consequent *heat*, and a disposition to inflammation of these fine organs, as before described.

Q. Unless we stop the cause, as much as in us lies, by stinting the food to less nutritious substances, by a *meagre day*, occasionally, by purgatives, and by exercise: Am I not right now?

A. Either will suffice in slight cases to reduce the troublesomeness of the cough, though the whole

being put in requisition may not cure it. You did right not to commence your proposed remedies with "exercise," as most people, conscious of their primary neglect, would have done. This is the same kind of cough as that noticed before, as being the plethoric cough of the foreign draught horses, imported here to enjoy hearty food and a life of comparative laziness in their younger years.

Q. A certain "very ingenious gentleman," who occasionally "rides the tall horse," *swears* himself to the fact, that none so cough upon high feeding but such as are touched with latent chronic affection of the lungs.

A. His objection is not worth a straw, though it chance to be better founded than mannerly. I will tell you a fact, however, which he has seen me practise with success. When I suspect a horse I am about to buy is *touched in the wind*, and has been treated with the saline feed of oats you spake of, or has been *shotted*, I take him out for a trial, order him a full feed of oats, (but no water,) and, in the drive home, keep a strict look out for any indication of "badness in the wind."

Q. This soon finds them out: a full stomach is a sad tell-tale.

A. Whencesoever the hectic may arise I care not, I simply do not purchase.

Q. On driving a horse sharp, after such a feed, there is *a catch* in the wind observable sometimes.

A. Occasioned by the full stomach pressing upon the midriff, and not allowing of sufficient room for

the tender lungs to play—at least not to their ordinary extent.

Q. It soon goes off again, however, and nothing more is seen of it.

A. Oh, yes; but "*something* more is seen of it," though not by you, my friend. The feet falter when the lungs are so *touched* for any length of time; whilst, by the same sort of sympathy, companionship, or *fellow feeling* between them, the *pace* of the horse punisheth the *feet*, and communicates their baleful sufferings to the *lungs*; hence is it reasonable to conclude, although I did not know the fact from experience, that the communication of such ills is reciprocal. Can you have forgot, already, how strenuously I insisted upon the same indication of incipient founder in a former Conversation we had, when talking about foot lameness? page 26.

Q. I do recollect it well; and hope I shall never forget that important advice, or aught else I have heard from you, with as much pleasure as attention, and I expect of eventual profit: what is more, I have made a memorandum of all that passed between us daily.

A. And if you dare to print it, the doctors will ***nothankye*** for your pains.

Q. What is more, they will say you do not speak in language sufficiently scientific, *for them.*

A. I care not: my wish is to be useful to the majority, not agreeable to a secluded few.

Q. By the way, being myself tolerably well *up*

to the medicated corn I hinted at just now, as being given by a certain description of dealers, I have tried the effect of filling the stomach of the horse, so treated, with *unadulterated corn* afterwards, and, although defective wind was perceptible, *the going* was true enough; no faltering or tripping occurred.

A. In that case I conclude the horse was an exception to the general rule, not so bad as he might have been, or you did not try him far and fast enough to find him out.

Q. Going eighteen miles within an hour and three quarters, with a heavy gig and two persons behind him, is no child's play.

A. If so well after such work, hopes might reasonably be entertained of the lungs recovering, by giving the *attenuating powders* in his corn, whenever such a cough makes its appearance, or we have reason to expect its return. If the horse refuse the corn thus prepared, give the same in a *drench*; but, should you desire to aid the secretion of urine, do not increase the dose of nitre, but add to it camphor one drachm, dissolved in the gruel. [Turn to APPENDIX.]

Q. Some horses contract a cough periodically, either at the season of turning out to grass, or at the moulting season.

A. Either description is likely to become *chronic*, or lasting, without due care; if a good number of horses are attacked at the same time, they consider the disorder as an *epidemic*, and infectious.

Q. *Epizootic* is the new French name, and the most proper, I am given to understand.

A. Nay, nay, stow away your fine learning in as small a compass as you can afford, if you please; your friends, the French, don't know above a quarter about horses that we English do, notwithstanding their boasted 'discoveries,' though they pursue the labour of dissection more assiduously than we do, *generally speaking*. *The epidemy* is attributable to the wet season, I tell you; we alluded to these matters in Conversation iv. when talking about soiling, (p. 53.) Such horses as are of tender constitution, as all are which have undergone *catarrhal disorder*, should be exposed as little as possible to sudden changes in the air; though that be from cold to hot, from humid to arid, or as some would think from a worse to a better state! They suffer most, or benefit in no trivial degree, by a run at grass, according as the season may be cold and damp, or hot and dry.

Q. To conclude—Whichever way the symptoms tend, they should be met by an ever-varying treatment?

A. It follows, from all that has been said, that he who undertakes the cure of any affection of the lungs—all of which are of an inflammatory tendency, and every one of them preceded, accompanied, or followed by *cough*—must have recourse to expedients of several kinds: he must, in all cases, assiduously guard against relapse, and distinguish between fresh attacks by needless exposure

to inclemencies, and the aggravation of any old complaint by overwork.

Q. Any other course would but confirm some one or other of those hateful symptoms we have been talking about these two days.

A. That incurable malady, a *chronic cough*, being the main one to be dreaded; though, when the incipient *catarrhal cough* we set out with this day, becomes, by neglect, confirmed *inflammation of the lungs*, and this is partially cured, the thing is not rendered a whit better; nor indeed altered one way or the other, as regards the future disposition of the organs of respiration to acquire fresh inflammatory disease of one kind or the other.

CONVERSATION XIV.

Inflammation of the Lungs, how incurred. Pulmonary Consumption. Adhesion of the Parts: Symptoms. Crisis, how denoted: Effusion.

A. Not at all necessary is it to *inflammation* that the patient should contract the minor disorder of these parts, (a cough,) at *first*, and we permit it to creep on unchecked until it extend its virulence to the central and more vital parts; and there pursuing its ravages, obstruct the busy action of the pulmonary arteries in their function of reanimating

the blood by the health-imparting influence of atmospheric air. *Inflammation of the lungs* as often commences the attack in its most appalling form; and also affects the horse's going, instantaneously, as 'twere, when the cold caught has been very acute, or to a great extent.

Q. I contended for no other, and merely meant to say, that the cough we usually find prevail on shedding the coat, might be prevented from running to a height by attending carefully to two or three points of our grooming duties at the time.

A. To be sure: let him lay aside the curry-comb, and dress with brushes only, nor that too much, and let him clothe lightly his less hardy horses. [See *Brush*, in APPENDIX.] Let him also look to the dungings, which he will find assume an obstinately costive appearance, when the individual patient may be full of hard meat, and altogether so replete with blood as to render such an attack dangerous in the extreme.

Q. All other causes of inflammation of the lungs, properly speaking, may be referred, I imagine, to those already stated as producing "a cold" of any other description, as catarrh, &c. only with greater aggravation, symptoms more virulent, greater danger, and leaving behind more tenderness, and increased liability to contract anew a similar series of inflammatory disorders at a future period.

A. Any of which, by neglect, mistakes in the treatment, or of frequent recurrence, leave behind a cruel and incurable disorder they term *consump-*

tion in human medicine, whilst they of the veterinary practice, as well as those of the stable, reckon it *wasting away*, debility, *done up*, &c.

Q. Yes; *consumption* they call *pulmonary*.

A. Because of the arteries, so termed, that perform their part of the important function of blood-refining in the centre of the two lobes of lungs; which are liable to an original disease, (as well as this acquired one,) believed to be hereditary, and consists of want of action and consequent obstruction in the parts, occasioning *adhesion of the parts* together, and eventually consumption or decay.

Q. Some *gets* prove *thick in the wind*, or roarers, from parent to foal, with such remarkable trueness as ought to teach *breeders* a lesson.

A. *Adhesion of the pleura*, or thin covering of the lungs, to the ribs, as also of the lungs to the midriff, on its upper side, and of the liver to the same membrane on its lower side—as these afflictions cause greater labour, pain, and heat, upon the animal being put to his paces, so does this inflammatory tendency further dispose the parts to augment a dangerous disorder of which it is itself but an effect.

In what manner this evil is first brought about has already been dilated upon when speaking of the same description of adhesion afflicting the motions of the intestines, (page 146); but how much more oppressively the lungs must feel its effects re-

tard *their motion*, may be judged of from the more extended action these are subjected to by every effort at progression, when compared to the mere corkscrew-motion of the *bowels* and *stomach*, alluded to *Conversation* ix. page 128, &c.

Q. Which be in comparative quietness during the greatest speed, while *the lungs* are taxed to their utmost inflation and efflation at an ordinary canter long kept up. But why should we look about for distinctions when those frightful adhesions we speak of communicate their baleful effects from one internal part to another so readily!

A. For this reason alone. As adhesion of the *organs of respiration*, and even of the heart (or its appendages) to the surrounding parts (the ribs,) and to each other—the induration of some *(the pulmonary)*, and the thickening of others (the *pleura)*—admit of alleviation, if not of cure, upon being *detected in early life*, though utterly incurable when lasting to full age; whilst in all cases of adhesion of the bowels, the stomach, the liver, &c. to each other, and to *their* surrounding parts, admit of no alleviation but of that which time effects and nature herself performs. The latter may therefore be permitted to take its course; man acting simply as the handicraft of nature, administers only such remedies as address their efforts to these parts. Whereas, whatever aid he presumes to afford *the lungs* must be given promptly, or not at all; relaxation from severe labour, the

cooling regimen, and regulating the evacuations, being nearly all the treatment that is common to both kinds of attack.

Q. A horse may get fat, *puffy fat*, with a sleek coat, although suffering from a partial attack of this nature in the hinder part of his intestines; and he may *go* tolerably, even when the adhesion has extended itself; but he is incapable of quick action, or of long continued work, when the organs of respiration are the objects of attack *in any degree*. It would be highly desirable to know how to distinguish between the attack upon one part and that upon the other; distress, and *defective going*, I take it, indicate this disorder generally—but how shall we know whether the one or the other kind is then present?

A. Thus: by dint of close observation you will be able to judge when any horse under your care is *otherwise than well*, though standing in the stall or *hitched up* outside the stable, and the healthy pulsation not materially affected; chiefly by the state of his *mouth*, which will be dry, if not hot, and shortly the whole muzzle becomes hot, the *legs* and *ears* rather cold, and the *eyes* dull. When *going*, this becomes more apparent in his defective paces; tripping, relaxing in his speed, clicking a hind toe on the ground, being considered new defects so acquired. If he be put out on his best pace awhile, those indications become the worse for it; unless the disorder be so virulent as to stop some vital function, and the animal drops down.

By continuance of labour the pulse increases: when the pain lies at the lungs, 'tis more acute than when the seat of disorder is *behind*; and as the beats increase in number, greater sharpness also becomes sensible, if *before*; not so if it lies *behind*, when the pulse, though it rises in proportion to the mischief going on, is *dull* and scanty until the inflammation reach its height.

Q. Perspiring freely at less than ordinary exercise is one sure sign of "something amiss with him," as our lads of the stable express themselves, quaintly enough.

A. If this takes place without any other assignable reason, the disorder, whatever it be, lies in the *hinder part*—the bowels, liver, kidneys, or stomach; if his ordinary exercise affects the wind first, the perspiration *following* it, proves that the animal is pained in the *fore part*—i. e. the lungs, the heart, or the midriff.

Q. This being ascertained, you take your measures accordingly.

A. Cessation from labour being self-evidently the first. For, should the disorder be owing to adhesion of the parts, continuance of hard *labour* will be sure to end in inflammation of them; if inflammation have already come on, *stop* it, or you kill your beast, as sure as fate, if a good one: *walk* him.

Q. He totters and stumbles about ere this final stroke takes place.

A. The fore-legs being mostly affected when these

latter—the organs of respiration are attacked, his hind-legs when those of digestion are the seat of disorder.

Q. All four at his coming down.

A. Don't attempt *wit:* 'tis misplaced on such a topic. From whichever cause proceeding, when inflammation of the lungs has *struck* the animal, the symptoms rapidly follow each other in fearful succession; of which, shortness of breathing, though at rest, is the earliest and surest indication, accompanied by drooping of the heart, parched muzzle, cold ears, and, shortly after, *shivering*. Refusal of food and a sharp, agitated pulse, from the first, with subsequent *quickness*, prove with what facility the disorder extends. If, in the course of the attack, shivering recurs several times without the intervention of a corresponding fit of *sweating*, the danger is imminent indeed. Horses in your "*fat* condition" decline from the healthy state more rapidly than those which may have been in my "working condition," those *out of condition* slower than either.

Q. I see; I see my error, as to fatness not being the genuine state for doing quick work.

By the way, with what anxiety, after a hard day's journey, does the commercial traveller *inquire*, (if trade press so heavily that he cares not to *go and see*, as he ought,) "Ostler, does my horse take his corn?" conscious, from long experience, that the concern at home must lag if his horse does

not proceed. How very liable are the horses of such *tradesmen* to acquire disease of the lungs—usually in its milder forms!

A. But always with the disposition to wax worse; owing to the very long stages they occasionally take, each followed by very long *rests;* their journeys being performed more in conformity to the demands of their commercial views than to the preservation of their horse. They quite lose sight of the due subdivision of labour and rest into minor portions, as well as rightly apportioning these to the *kind of feed*—such as you and I agree upon in the main. [See pages 132, 3.]

Q. Then again, a fresh stable and a change of water, ten or twenty times a month;

A. With each time, a change of ostlers, and of treatment, as regards the mode of watering, and the variety—nay, contrariety, of commands, all equally imperious and distracting, as to much and little, often and seldom, cold or tepid, before setting out (alas) or at coming in.

Q. Those disputed and debateable points upon which we discoursed in our *Fifth Conversation,* (pages 61, 65, 70 74,) and which might well divide the opinions of persons more exclusively attentive to *horse-flesh* than the vendors of *shop*-goods can reasonably be expected to bestow time upon.

A. Are they not, like the industrious Bee, "here this hour, gone the next?" Yet they should study with care, indeed should they, the earliest

indications of affections of the lungs, just mentioned.

A. Cold ears and legs, as in other inflammatory complaints, come on with these first symptoms, and last until the turn of the disease, which we watch for with sedulous care, and of which they are the true thermometer.

Q. The *pulse* is no less so.

A. *After the first day* of a mild attack on the lungs, most assuredly, when it may not exceed forty-two to forty-six beats a minute; but in twenty-four hours it mounts up to sixty or seventy, becoming still more quick (though not *fuller)* and irregular, sharp, and indistinct by turns, as the pain may be more or less acute.

For remedy, bleed as directed for colic (page 140), and three or four quarts will not now avail, but must extend to five or six quarts; and the *repetition* as there directed, if needful, should now amount to a state of *tottering*, particularly if the pulse have increased since the first bleeding.

Q. Will nothing less suffice?

A. Not an atom; for, unless you procure that "turn in the blood," which shall cause the happy *effusion of water* at the chest, we spoke of four days ago, you have achieved nothing. It sometimes takes place while the operation is going on, and is the signal to desist: but more frequently it is found to come on after the first *motion* consequent on the *physic* that is invariably to attend upon the bleeding. (See page 140.)

Q. "Desist," was it you said! What! when a great good is being brought about by bleeding, or any other means, would you give over, *desist*, just then? This requires—

A. Requires! It requires nothing—but common sense. When you have accomplished all you want, when you have attained your end, what necessity for pressing *a remedy* at a time that nought remains *to be remedied?* Would you keep on asking the governor for your salary, for example, after he had paid you, because asking turned out so beneficial? Would you continue galloping about, like a cockney, after the fox is killed? Would'st eat more after thy stomach is filled, thou precious admirer of fat—cattle?

Q. Nay, nay; I'm sure a thousand people, taken from all the studs of England, including Ireland and Scotland, would have asked the same question, whether fat or lean.

A. As weak argument as 'tis poor geography: the number of persons that support an *error* does not sanctify it into *truth*. Moreover, by reducing the system too much by bleeding, by purging, diuretics, or other attenuants, we cause this salutary *effusion* of "water in the chest," until it becomes *a disease*, bearing that very name; for although the membranous part of the system constantly requires this kind of lubrication to prevent the ills of adhesion and inflammation, yet a superabundance thereof getting into the cellular passages, *dropsy* ensues; which although never appearing in that general

manner they term *anasarca*, yet is evidently the cause of those numerous tumours underneath the skin, they term œdematous swellings.

Q. You blister the chest extensively, I observe, for inflammation of the lungs.

A. And would likewise put in a *rowel*, or a couple of *setons*, if I had your heavy, fleshy cattle to deal with. But for the better bred horses,—*goers*, the blistering effects all we can hope for, as to diverting the disease from the vital parts to the superficial.

Q. The bleeding you advise appears to me excessive?

A. It must be proportioned to the danger: and if this be imminent, one large bleeding—say five or six quarts, is better far than two moderate ones of four quarts each.

For patients that may be *costive* at the commencement of the attack, the good to be expected from the *first operation* will be mainly assisted by giving a *bran-mash* previous to the bleeding; or a dose of *castor-oil* (one pint), and a clyster, consisting of a solution of Epsom salts, or common salt, in warm water; and in case of the costiveness being at its worst state, let the dung be drawn forth with the hand.

Never bleed in the open air for inflammation of the lungs, nor give a *very strong* purgative after it, but prefer dividing the apportioned dose into two parts (one for morning, one for afternoon), lest you otherwise transfer the disorder from the

lungs to the *bowels*, which inevitably carries off the patient.

Q. *Inflammation of the lungs*, as you observed before, in symptoms and cure, resembles very much the like kind of attack on the *bowels*—in all but the locality.

A. They tally in other respects, also: and so do the relative minor diseases of *colic* and *catarrh* bear the same affinity to the two major attacks on the like organs; both devolve into the more dangerous state by neglect, both influence one other organ, *viz.* as the stomach does the kidneys, so do the lungs the liver, whilst your labour is but half completed when the inflammation is subdued.

Q. Then commences the ceaseless duty of *restoring* health, in all such inflammatory cases, by getting the stomach into good humour, the bowels in good trim, and keeping the body cool.

A. Give *tonics* [APPENDIX] for the first; for the second, give *alterative* laxatives; but, for the last, do not apply cold water any where, nor permit a *stream of air*, nor clothe with woollen by day, unless the weather be *cold*. Walk the convalescent animal to breathe the fresh air, by day—shaded in summer; give him a roomy stall and lofty stable, with plenty of grooming, so as to keep down the thick legs that now make their appearance; and so continue until the faculty of perspiration returns, at which period the extreme heat of his skin goes off. Hereupon his exercises are to re-commence with the most gentle walk, daily

increasing as his strength returns, and hard meat and full feeding take place of the green food, mashes, and gruel, I before recommended, when speaking of the twin affliction, *inflammation of the intestines,* page 161.

Q. The animal's recovery is only half completed when the disorder is gone, or, as we say, "is killed," coarsely enough; when the inflammatory symptoms have given way to those of weakness and langour, enough remains for us to do in restoring its wonted powers and taking care that this be done without endangering a relapse.

A. We have already discussed this topic in our *Tenth Conversation.* [See pages 100, 149, 160.]

CONVERSATION XV.

The Liver; its Complaints. Function impeded: Adhesion.

A. *Liver complaints,* as all affections of this very delicate organ are obscurely termed, were spoken of lately, as *causing* some of those derangements we were then talking about, as, 1st, inflammation of the intestines,—2dly, inflammation of the lungs. Yet are there some persons who deny that *the liver* is subject to inflammation at all; many more (*writers* and others) treat this point with indifference, with frigid silence.

Q. They had merely to ascertain whether this organ had ever been found attached either to the *intestines* or to the *midriff*, to have been convinced, though they might not acknowledge, that neither could take place without *inflammation*. Do they study practically the anatomy of *diseased* subjects?

A. None other, I understand, what little dissections they do labour at; and some of them would have us believe, that that is the healthy *form* or *function* which is produced only by disease.* Now, I have reason for thinking, that some very trivial attacks indeed, which would have gone off with the minor complaints, *colic* in one instance, and *catarrh* in another, terminated in the more serious ailments, viz. *inflammation* of the one and the other viscus, by the aggravation of the liver's *adhesion* to the particular organ so affected, in consequence of its great *heat*, which would be *inflammation* of the liver to all intents and purposes.

Q. Thereupon, its function of separating the bile, being impeded, its action would become more laboured, the biliary duct would vitiate its contents, and return it into the system as jaundice, or retain it and cause inflammation.

A. The same vitiation of the bile, its retention in the duct, or re-dispersion over the whole

* In the form of the *coffin-bone*, Mr. B. Clark (the stereopleatist) is proved to have mistaken the diseased for the healthy shape, and to have fashioned his shoe accordingly. (See Hinds's Veterinary Surgeon, page 433, *note.*)

system, might be occasioned by the general ill state of the blood, when the depraved secretion ranged about and committed those ravages we call "the humours." But for *the liver*, the blood would circulate in a state unfit for giving health; when it comes hither in a state incapable of being refined, inflammation ensues.

Q. Whence its several "complaints," and the communication of these to the contiguous parts.

A. How could the effect be otherwise? The *growing* (which we term *adhesion)* of the upper part of the liver to the *midriff*, would cause difficulty of breathing, proved by a certain *catch* in the wind occasionally, which the sellers of such *things* pass over by the slight term of "only toucht in the wind, but no harm;" a touch, however, that is likely to turn out incurable, notwithstanding, as described by me yesterday, [page 198.]

Q. As to the other description of adhesion, when the lower end of the lobe becomes attached, how comes it to pass that a slight attack on the bowels, which, under other circumstances, might have terminated in spasmodic colic only, and so passed off quietly, is, by this species of aggravation, made to assume the most alarming symptoms of obstinate inflammation? In fact, it soon kills—

A. Prime horses in a day or two; ordinary ones resist its direful effects much longer. I thought I had touched upon this topic before; but thus it is,—when the vitiation of the bile or the general ill-state of the blood, just spoken of, has thrown the liver into disorder,

heat and inflammation ensue, and ulcerated surface, towards its lower extremity, is one of the baleful effects thereof; as is known when languor is a leading symptom; but when the ulcer attaches itself to the bowels, occasioning a species of colic pains, the pulse quickens *a little*, and the horse parts with languor for worse symptoms. Or, the ulcer attaches itself to the membrane that keeps the whole intestines in position, as may be ascertained upon the touch externally; whence some medical people are led to conclude, that all colic and inflammation is no other than affections of this membrane—they term *peritoneum*, and its disorder "peritoneal inflammation." This, however, is an error, as to the *extent of the disorder*; for, sometimes both peritoneum and great gut adhere to the liver, in the manner described; but a natural remedy is at hand: the ulcered liver destroys the gut, so far as the adhesion extends, suppuration takes place, the offensive matter sloughs off, inwardly, and is carried away with the dung.

Q. How are we to distinguish between this species of attack and *inflammation*, or *colic pains?*

A. There lies the difficulty. When the symptoms vary between these two disorders, and the close observer is puzzled in deciding which of them afflicts the horse [See pages 145, 191]; the pulse being *low*, though the pain be *acute*, and the lower part of the belly evidently *tender*, thereby affording a flat contradiction of the rules laid down here and elsewhere for discriminating between *colic* and

inflammation, we run no risk in deciding that the disorder is this one of adhesion.

Q. At the time this painful process of nature is going on, it is evident we should not work the patient, nor give drastic medicine, nor cordials.

A. Nor bleed; the state of the pulse will not warrant this operation; its indistinctness and languor forfends the use of fleam or lancet. Neither should the horse lie in the stable, day after day, or any day; nor wear warm woollen clothing; both of which do but increase the capacity of the liver. But he should be *walked out*, with a thin body covering of linen girthed over the belly and flanks. If the dung be *at all in form* he must have the *laxative ball* [No. 1]; if he droop, as he will upon the ulcer sloughing off, give a cordial drink [*White Water*, No. 5], not too strong. The process to cure will be visible in the state of the dung.

Q. Whereupon health resumes its wonted appearance in the *manner* of the animal. Pray how long may this particular species of adhesion last, under the most favourable circumstances? And is it of frequent recurrence?

A. Much oftener than our observation is directed towards the part; but the duration of palpable disorder seldom exceeds a week. This will depend upon the treatment of the patient, as to *medicine* and *work*: if either be violent, inflammation in its worst form supervenes, and death ensues, if the animal be one of high temper, or good breeding, as usually is the case. Neglect, or inattention,

however, assure to the afflicted animal at least this chance of escape from medicine; in addition to this, we generally have too much grace (derived from *interest*) to push an animal of great value when he faulters in his paces.

Q. I have found, more than once or twice, a horse of known good qualities obstinately to refuse his usual gallop, and return home in a sweat notwithstanding. Those were *aged ones*, or nearly so.

A. Always happening to such, provided they have been misused and knocked about at races or steeple-hunt, or in the extreme long chase, although receiving every care the stable can afford, afterwards. In fact, I am not certain, but this very *care* to wrap up the jaded animal in hot clothing, with a hot stable, and absolute rest—not a walk! have brought about the disease; *enlargement* of the liver being the never failing attendant upon the application of so much unnatural heat, with the consequent heat of this organ, and the dangerous disease we are now talking of. Further, let me add, if young horses are ever afflicted with this kind of adhesion, it goes off again by gentle exercise and the vigour of the animal system.

Q. But I have yet to learn how this adhesion of the liver to the bowels can affect *the wind?*

A. Not this but another mode of attack, viz. on the *thick part* of the liver, both never being present at the same time. When the liver is in full possession of its functions, and any derangement of it, or the contiguous organs, takes place through

chill, cold, or inflammation—as before insisted upon, in several of our conversations, (consult INDEX,) then the superior part of the liver adheres to the *midriff*; a misfortune this which happens, also, when this part of the organs of respiration is itself the subject of disease, arising from great speed long kept up. You may be assured, also, that adhesion is one of the relics of ill-cured inflammation, either of lungs or bowels; and, that this attachment of the parts to each other, continues long after the original disorder has given way to the remedies.

Q. Wait a bit, if you please.

Although the glance you have taken of the matter is somewhat too rapid, I begin to be convinced of the important nature of the functions the liver has to perform; for, I remember well, that the whole blood of the animal system passes through the liver to be refined of its *bitter principle* (bile) many times a day.

A. This is all the knowledge I could hope to infuse you with at present. Your next care should be to bring it into use, by close observation, and thereby learn how to obviate the evils arising from this complaint, which mostly consist of over-physicking upon hard work.

Q. Duly apportioning the water in frequent small quantities, being one of the means

A. Of *prevention*, after the subsidence of inflammatory fever, and at all times. As observed before, this affection occurs often and goes off again by *proper* exercise, though certainly not so

by strong work, but the contrary. Do you not perceive, that a horse fails in his performance sometimes, and sweats inordinately, (as you remember,) but his power of going returns again after awhile, in good form? None have told us the reason why.

Q. He halts in his paces, too, which also goes off; unless being pushed in his work, severely, the lameness is confirmed, with aggravation, and afterwards appears at his feet.

A. Whenever lameness comes on, the cause of which we cannot otherwise satisfactorily account for, and this is followed by a partially staring coat, the *cause* is internal, and whether of the fore part of the animal, or the hinder part, is indicated by the roughness appearing on the chest or on the belly, and shows the ailment to be of *the lungs*, or *behind the midriff*.* When we have ascertained, by means of the pulse, &c. that inflammation exists in

* When such partial roughness comes on, most people cry out "worms!" White, and R. Lawrence, and Clark prescribe medicines that will inevitably kill them, and a thousand Botts to boot; but the best prescriptions *fail to produce them* in any number, though the globe has been ransacked for remedies. Hence I conclude, that *worms* do not prevail so often as is asserted, but that the real disorder, in nine cases out of ten, is no other than adhesion. White had an accurate presentiment of this disorder, but wanted industry to push the hints he received home to a complete developement, in his time. He never went further than admitting, that adhesion of the liver and midriff might be mistaken for *worms* (his favourite disease); and, on the contrary, that the presence of worms might be mistaken for "a *defect* in the organs of respiration, which also produces weakness and emaciation, similar to *the worms*."

neither, that is to say, *no where acutely*, we may safely conclude that the liver, which is not subject to an *acute* disorder, is then affected, and that by adhesion, in the manner described.

After all, I believe we must allow that this adhesion of the superior part of the liver to the midriff is caused by an original disorder of the latter, arising from the heat occasioned by the quick pace, and great lengths with which most free-going horses are abused; which is further enhanced by the repetition thereof, followed by *absolute rest*, and the exhibition of cordials, with high *keep*.

CONVERSATION XVI.

Of some necessary Operations; and chiefly on Shoeing refractory Horses.

Q. A few more heads of information remain for discussion, if you please, all contributing to the preceding views we have taken of the means of preserving the horse's *condition;* and, among others, nothing mars our endeavours more than the "battles between smith and horse," alluded to by you at our *first* day's conversation, (pages 10, 13,) whenever the animal is taken to be shod. The foreigners have the advantage of us English in this respect.

A. "Us English" comes with a bad grace from you, my lad, who never take notice of any varia-

tion in the practice of this and other countries, but you give the preference "*sans pu contredire*," as you phrase it, to foreigners, and even prefer those foreigners' horses to our own, whatever *class* or *description* we may bestow our thoughts upon.

Q. Except *the racer*—say?

A. Except all, then; for, of what use are the other descriptions of horses, unless they have the *gift of going* in them, slow though it be? Mere wooden horses, "say." Do they not come here and buy up our prime goers to improve their breeds in this respect.

Q. They only purchase the *second best*, or *third* for the Legers, Derby, &c.

A. I infer, that they can only hope to infuse second-rate speed (or going) into their breeds from such stock, down to the third and fourth generation; and even less when this arrives at the fourth and fifth description of horses; if their brood-mares of the working classes ever do receive the least tincture of the prime English stallions they seek after with so much assiduity, and procure at so great an expense.

Q. Good reasoning this; for I observed that their breeding farmers fall very short of ours in that necessary article to a good get—*capital*. But, turning short to the left-about, we are accused, I think justly, of treating our horses with too much "brutal force," in performing the *necessary offices* about them, *shoeing* in particular, and that we perform many operations unnecessarily, and some of doubt-

ful efficacy. Among the latter they reckon rowelling and setons, and firing of the second kind; *burning* out the hairy lining of the ears, *cropping*, and *docking*, and *clipping* the coat, and *pulling* the mane and tail, are execrated almost universally in France. The violent manner in which mounting, and breaking, and training, and physicking are performed, you yourself have already allowed *wrong*; next let me draw your attention to the *economy of shoeing*, not exactly the *practice*, but the manner of going about it.

A. What you say regarding our shoeing-smiths may be tolerably accurate, if you speak *generally*; but none ever exercised their trade under my directions who employed the "brutal force" you charge them with: it is our duty to prevent this, should such characters turn up; but I believe never does happen in the stables of trainers of any degree, nor in hunting studs. Those who reproach the English nation with this crime, have drawn their conclusion from the lower order of smiths of former times.

Q. Truly; but here and there, the better descriptions of horses you allude to are *constrained* and *forced* to undergo operations, not in themselves altogether disagreeable, which might have been as well performed by gentle usage, by coaxing, and *the voice*. You and I have frequently spoken to these points, to *the temper* of the horse, and how it gets spoiled, in the course of these Conversations, (see Index—*Disposition, Temper;)* but

here is a foreigner's *publication* in my hand, who undertakes to teach *by rule* what you and some others know already "by rule of thumb," as I have heard you describe some other modes of *doing things without method.*

A. Does he take advantage of what he has learned from the English, and then abuse us?

Q. No doubt he has witnessed the *stable management*, as well as the *operations* of our cavalry, and that of the fine animals attached to our embassages; but some of his observations are exceedingly plausible. He says, at setting out, that the first *blunder* we commit with our horses is to "transgress the law of nature, according to which "they ought to be treated, if we would not run "the risk of requiring from them totally contrary "services from those for which they were destined."

A. Why, I have read the same words, seven years ago, in the *Annals of Sporting.** In the course of our preceding *Conversations*, how often have we not dilated upon the mild treatment of

* Not exactly *the words*, but what may be a translation of them into German, and back again. The same idea appears in HINDS' "Veterinary Surgeon," at page 8:—"The cause of humanity "may be served by ascertaining the nature and amount of the "horse's powers, and thereupon demanding of him no more "in the way of service than is clearly proveable to lie within "his power, or putting him to those labours only to which his "capabilities are adapted." The cause of humanity, the advantages of mild treatment, and the policy of studying the temper of this valuable animal are advocated throughout the work just quoted.

the horse, being far preferable to violent forcible constraint?

Q. We agreed, that 'the voice of the groom could be profitably employed in correcting any vice he might discover in the horse' (page 12); it was shewn (in a note at page 70) that well-bred horses recognised the tones of man's voice, and you very often adverted to the means of studying the different *tempers* of the several classes of horses, which the English are accused of disregarding. Now this gentleman (Lieutenant *Balassa*) does no more than *awe* his horses during the operations of shoeing, &c. by the voice, *his looks*, and gestures; and conciliates them by stroking with the hand, *aslant* the face, whilst holding the head rather short and steady with the *cavesson*.

A. Such is our every-day practice, when the better-bred horses are *taken to be shod*; not less than three or four of us employing each his best offices in allaying the fears of the irritable animal. This stroking the face is the only new feature in his boasted "art," that I can yet discover.

Q. His translator imagines that we employ but *one* person in shoeing horses *here*, which is only the case with common working cattle; whereas, in France, they have two *door-men* and one *fire-man* to every tenpenny shoe they put on a five pound nag. [See HINDS' "Veterinary Surgeon," p. 472.]

A. More frequently they go without shoes, I think you told me. Read on, *briefly*.

Q. At the same time that I call sharply to a horse, says the Lieutenant, I look sternly at him, and every one must be aware that the stedfast look of the human eye has an irresistible effect on the horse: kind looks and words encourage and reward him; the object being to divert his attention from the man who is putting on the shoe to the groom who has hold of the bridle (a snaffle) and cavesson, and to *nought beside*. Meantime, stroking crosswise with the hand over the forehead and eyes of the horse, renders the most vicious and shy so gentle and quiet, that if no objects near him divert his attention, he will hang down his head quite low, and seem to be almost lulled to sleep.

A dark, or at least a shaded place, is most conducive to quietness; where the horse may be placed with its head inwards—the light entering from behind. Any disposition to restiveness may be anticipated by observing the motions of the horse's *ears* and *eyes*, both of which it then turns towards the smith. This is to be corrected by shaking *the reins* from side to side, by shortening and lengthening alternately the *cavesson*, by increasing the sharpness of the voice and threatening aspect, and making the stubborn or vicious animal comprehend that something is required of him. Order being somewhat restored, the caresses are to begin, as before said. Placing the cavesson in the left hand, short, along with the bridle, or even taking hold of the ring of the former, patting the

shoulder and smoothing it down on that side the smith may be required to work; stroking the face and soothing accents are the final means of accomplishing the job—as regards one foot.

A. Yes, yes; and so on for the whole set. I see nought very extraordinary fine in these instructions, that you vaunt so much; nor does he speak to the annoyance such high-bred horses experience from the noise of the smithy and number of people about him, or the presence of the boy who rides him to exercise. Go on.

Q. Here, read it yourself, page 23,* good sir.

* To make the horse comprehend you is a point of essential importance on every occasion. Thus, if the groom pays constant attention to the eyes of the horse, he will easily perceive when it is about to bite, to rear and strike out, or kick behind. He must immediately signify his displeasure by shouting, threatening, with the right hand elevated, by shaking the reins, not *lashing*, but gently; frequently he will have occasion to employ all these means of overawing the refractory animal at one and the same time, as exemplified in the annexed *cut*. For example, when the smith is about to lift up the foot of the horse, and the latter is disposed to resist, this will be manifested by its turning towards the smith its ears and eyes, the latter showing much *white* to the *groom* who has the horse in charge. Hereupon you should make the horse comprehend that it is not to withdraw its foot from the smith, and proceed to employ all the means just described of overawing such a disposition.

As the animal may show a more placid disposition, so must the groom relax his coercion and his threats; when those untoward symptoms return, these means must be resumed. But the the horse, however vicious, which has been treated in this manner steadily, never fails to show obedience to words of command or of encouragement.

During this process the groom must never take off his eyes

A. But you do not adhere to the book, I perceive; though I allow you render the thing taught more intelligible to me. So much for the *operative* part of the transaction.

Q. In England, we all know, they perform most of the offices about horses *by force*, or by dint of strength; and indeed when encamped in the *Bois de Bologne*, near Paris, many of the army smiths carried abroad with them this unamiable nationality—preferring it to the employment of cunning. They seize the foot at arms' length nearly, dragging it towards them *outwards*, instead of *backwards*, a

from the horse's, that the attention of the latter may become more firmly fixed on him. For hereby only will he learn to read, as it were, in the looks of the animal, the purpose of its *mind*, know how to frustrate any evil design it may conceive, and to direct the smith and his helper how to avoid danger or proceed with the shoeing. In fine, these persons will know from his *tone of voice over the horse*, or his commendations, when to take care of themselves. They ought to know also when the leg has been kept in one position too long, when the horse will require to rest it awhile, as well as when the paring way is carried on too roughly; i. e. in slivers too large (as noticed in a preceding page 21), a mode of proceeding that is highly injudicious, and the cause of much just resentment on the part of the sufferer. Heavy horses receive more annoyance from standing long on three legs than the lighter description of horse, for the pretended counter-lever which the smith thinks to afford the steadiness by bringing his hip against the superior part of the lifted leg, is as nothing compared to the great bulk that is thus thrown its whole weight upon the standing limbs, whilst the leg that is undergoing the operation is bent unnaturally, is strained out of its proper position, and the circulation of blood impeded, if not stopped.

osition no horse could long preserve, be it of ever o gentle a nature; in the course of two or three inutes under the drawing knife, the horse, feeling neasy, seeks to relieve itself from pain; if a low- red animal, he grunts discontent, and gets a blow, r abuse; if better bred, he kicks or plunges, and s with difficulty restrained from perpetrating some igual mischief. *Lieutenant Balassa* takes great nerit to himself for having *discovered* the manner f placing the assistant smith in such a situation as ot to get kicked or bitten; and experience has roved his plan good and practical; furthermore, t is reasonable, and, I must allow, much in con- ormance with our own management in the better escription of stables.

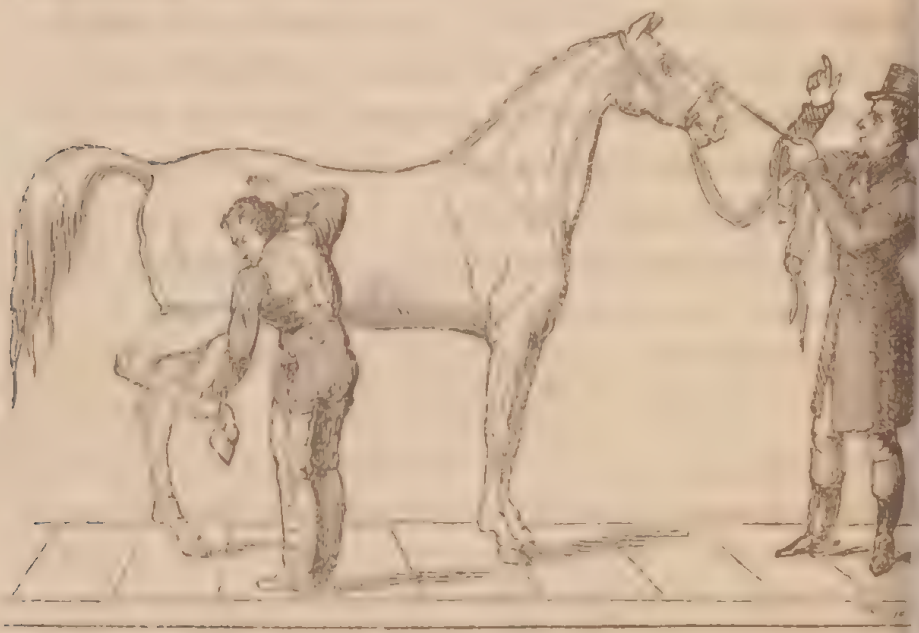
The position of the smith for taking up the off *ore foot* of a vicious horse, for example, is to place is own left shoulder next the horse's right—look- ng forward at its eyes and ears, watching for any hange therein. All being quiet, he proceeds to ouch the shoulder with the open left hand, to take old of a lock of its mane, and to familiarize with he horse by stroking the shoulder and the leg ownwards. But, as the horse will not rest quietly nder this treatment, the smith must place himself eside the groom, permit the horse to *smell him*; ien advance gently, touching the mane and noulder, and bring himself round to the *right- bout-face*, looking again towards the horse's eyes nd ears, and at the groom. This proceeding he ill have to repeat with a vicious horse more than

two or three times, at the first shoeing; and when at last he has got hold of the fetlock with the finger and thumb of the right hand, the thumb only is to be compressed, and that gently, against the coronet, in taking up the foot; thus carrying it forwards a little first, and turning both it and himself a half movement *round to the left*, he brings the heel of the horse up nearly to its *elbow* with both hands.

A. All reasonable enough.

Q. Not at the first essay, however, nor until several times lifting up, and setting down again *all the feet of the horse*, is the shoeing to commence.

The position and manner of taking up the *hind foot* is shown in the annexed *figure*, being nearly the same, *reversed*, as the instructions just read regarding the *fore-foot*.



A. Yes, yes; I perceive, that, upon the horse attempting to turn and kick the smith, the latter

would be thrown off a sufficient distance to be out of the way of the heels. I like this manner of placing the feet close together, most of our smiths straddling at it, as if they meant to "stand a tussle" with the horse.

Q. The lieutenant also discommends the practice of taking up the feet of vicious young horses in the stable, assigning no reason whatever for this dissuasive. He also advises that the assistant smith be himself drilled at thus taking up the foot, upon horses of a mild disposition, before he is employed in shoeing the refractory ones.

A. This is all very well, and ought to be put upon paper; but I do not altogether like the attempt of your *friends* to brand our countrymen with the charge of inhumanity by a side wind, particularly the inuendo respecting the conduct pursued towards a horse (and by inference *every horse)* in His Majesty's stables.* In all our *Conversations* you will find, upon turning to your notes, neither of us can accuse the other of having neglected the cause of humanity. We agreed on this,

* The facts are these:—the Russian general Platoff, having presented his horse to His present Majesty, then Regent, it was sent to Carlton-house stables, and fed as the other horses. What followed, but that he put up flesh too much for his nature, became restive, and, like every other created being, spurned his parasites, and punished one of them—appropriately enough! As to "the animal resenting the ill usage" he received, we are disposed to believe that he was only affected in the head by the heat of the stomach, occasioned by indurated fæces and fulness of blood—an every-day occurrence.

though wrangling occasionally on other topics. Indeed, the cause of this fractiousness in the Cossack general's horse has been already accounted for *by us*; and is wholly attributable to the high feeding at those stately stables, and constant indoor dry meat, that he became so vicious as to "kick the barbarous groom," as we are told; whose misconduct, I aver, consisted in nothing else than the error just mentioned, and which you and I shall never cease to denounce. My own anathemas to the same purpose were put upon record six years ago,* and had been verbally promulged five times as long before that.

Q. Doubtless, they followed the mistaken notion of keeping their horses *always in-doors*, on dry food—at Carlton-house. You certainly anticipated my lieutenant and his translator by all those years, so they gain nought as regards priority.

A. *The Cossack* wanted to range the hills and enjoy lying out, as was his nature, instead of the stately stable and two-year-old corn. Why, our worst grass-fields would have proved too rich for his uncommonly hearty constitution. In addition, they gave too little water, at that time of day, so the rough foreigner kicked one of the lads into better manners, it seems.

Q. And succeeded! Ha, ha, ha; my "*friends*,"

* In the Annals of Sporting, 1822, passim: "I never see a horse bolt out of the course, throw or kick the groom, but I imagine it an act of retribution for his mistakes in feeding, denial of water, tight girthing, &c."

hen, as you call them, have beat "us English," fter all. Good.

A. To be serious—there is no want of humanity n this country, though uneducated persons about tables may make a mistake in thinking they do not swerve from the line of their duty when they outstrip it. The two volumes by John Lawrence, "a Philosophical Treatise on Horses," had for object principally to advocate a more humane treatment than hitherto prevailed; and I have reason for believing that he did not wholly fail in his endeavours. *White* and *Hinds* followed in the same track.

Q. Something occurs to me, on turning once more to this book of the Austrian Lieutenant's, that the slur meant to be cast upon the conduct of the king's servants, in this respect, is the language of disappointment: discarded persons usually think ill of their former employers, and if these do nothing to merit censure, any little incident is fastened upon to justify that adverse opinion.

A. Eh! Oh, I see,—"revised by the late Veterinary Surgeon to his Britannic Majesty." That cannot be true,—the word *revised* is wrong; for, had Mr. Goodwin really "revised" the page where this unfounded calumny occurs, (page 27,) he would have amended the sense, by adding, that, "since the *accident*, (which is one of frequent recurrence,) the Cossask horse has been sent to Hampton-court, and there *turned out* in one of the paddocks; and being thus restored to compara-

tive freedom, upon green food, shows no furthe disposition to kick, or otherwise molest the peopl that come near him."

Q. Egad! he must have known the fact to b as you have stated it; for I have seen him a Hampton-court, and the Cossack horse too—a lit tle grey one.

A. A little grey—nothing very remarkable, only as regards his celebrated master. I would not give the two we exercised this morning, (see *Frontis piece*,) for a whole *pulk* of Cossacks.

Q. A *pulk*, a horde of two or three brigades Why, I would not find them. *Apropos*, as t shoeing horses whose *tread* is affected by *the posi tion of the limb*, and its attachment to the body,— What remedy would you adopt?

A. Merely making the shoe thicker and harde on the side the *wear* is most visible, and changing the shoes, when these are worn thin on one side which effects a temporary remedy.

Q. But nothing can cure the original defect o *bad built* or malconformation of the limb.

A. As is fully set forth in the first Chapter o "the Veterinary Surgeon," section 5th.

APPENDIX;

Including Extracts from the

"BOOK OF RECEIPTS"

OF

JOHN HINDS, V.S.

Author of "The Veterinary Surgeon; or, Farriery taught on improved Principles."

Antimony is a mineral of very great importance to our purposes. *In medicine*, it is prepared and sold under several names, receiving different appellations according to the means used in the different preparations, which changes its *manner* of operating; whilst its virtues remain the same, whether reduced by *pounding*, by *heat*, by *alkali*, or by *acids*. In the form of powder, given in oats (after being damped), antimony has the effect of making the coat *sleek*, and is, therefore, a powerful adjunctive in curing all *cutaneous* affections; but when indigestion has filled the stomach with sourness, and the bowels with flatulency, antimony acts with extreme violence, and then should be combined with potass, calcined magnesia, or soap. In its most eligible forcible form it is called sulphuret of antimony, is a bright yellow powder, without smell; but is often adulterated with chalk, which reduces its bright colour. From the extreme brightness of its colour, it acquired the vulgar title of *golden* sulphur of antimony. To be *pure*, it should not evaporate with the addition of vinegar or lemon juice, but will then turn white; and if put over the fire, the antimony will fly off, leaving the adulteration behind it. ☞Have a care, while making these *tests*, not to inhale the evaporation, for 'tis deleterious in a high degree. In fact, it is in this pene-

trating quality that its virtues reside; for, when submitted to the heat of the body, which, in the horse, is very great, it seeks to escape by the skin, and brings along with it, by *effusion*, the watery secretions of the membranous part of the system. [See Index, *Secretions, Effusion.*] According as the dose may be increased, it acts upon the stomach, so as to produce nausea, or, farther still, upon the bowels, as a brisk purgative.

Of *Tartar Emetic* (*Tartaris Antimonii* of the shops) prepared, or oxydised, by the action of acids, and therefore *white*, we have heard it said that 'were every other manner of preparing antimony (and there are several) discarded from our practice, nothing would be lost, whilst we possessed emetic tartar; for it is decidedly the most manageable and least uncertain of all the antimonial preparations.' This was said, as regards the human practice; but, though the action of antimony is very similar in both cases, yet the cruder sulphuret is frequently required to act more strongly upon the horse than the tartarized will do.

In doses of half a drachm, if the animal be well clothed, a perspiration, generally profuse, will come away; one drachm (the usual dose with farriers) will procure a stool or two, and this will be followed by sweating; two drachms, the quantity prescribed in *the books*, agitates the stomach, then purges, and both are succeeded by sweating. This substance is ever found adulterated in powder, so as to render its operation uncertain; therefore, let it be bought in the crystalline form, and be powdered afterwards. By solution in water, the acid being set free, a copious gold coloured precipitate ought to be furnished; upon pouring off the water, the adulteration will be found lying upon the antimony.

Aloes. This being the chiefest ingredient of all the purgative medicines given to the horse, demands more lengthened notice than we shall find occasion to bestow upon any other substance employed in removing the diseases or preserving the health of this animal; and the more so, as the danger incurred by the abuse of an invaluable purgative, by over-dosing, is further in-

creased by the variety, the uncertain quality, and the adulterated state in which this excellent material is found in the shops. As to its *manner of operating*, and the means of keeping down the dose to moderate quantities, according to the several kinds, and agreeable to the class of horse to be purged by them, the reader will find more information under the head of "Physicking," to which it more appropriately belongs. *Aloes* is an extract from varieties of a plant of the same name, growing in several distant and distinct parts of the world. Importers of the article divide aloes into four classes—among themselves, but endeavour to pass off the inferior for the better sorts, to the shops, as often as the former may have been extracted with care and assume a better appearance and smell, and consequently bear greater intrinsic value: in this mode of viewing the matter there remain, in reality, but two distinct sorts. 1. The Socotrine, or sweet scented. 2. The Barbadoes, or strong aloes,—as we shall see presently.

With the *first* is assimilated the best of the Cape aloes, or third description; the fourth being the "*Aloë Caballina*," or horse aloes; so called by certain vendors, from being the refuse of the others, though always made to appear bright, and therefore good enough in their opinions for the animal after whom they have named it in derision, as if any rank, stinking, drastic substance, were befitting the horse! These are to be rejected, as totally unfit, and dangerous to be given to horses with tender insides; whilst, by frequent use, they render the most robust horses tender, and thus work ruin on either description. Let us prefer the best, or at least, stick to *one kind*, of which we know the strength by experience.

2. Such aloes as dissolve the readiest in hot water, in proof-spirit, or weak vinegar, leaving the least of sediment at the bottom; such as possess, at the same time, a fine aromatic flavour, is hardest, with a smooth, dark, reddish coloured and shining surface, and having the least dirty residue or gourd on solution—may ever be

deemed the best and purest, whether coming from the *Cape of Good Hope*, from *Socotra*, or elsewhere.

Compared together the *Barbadoes* kind has less depth of colour than the *Socotrine*, and comes to us in larger lumps than the latter,—it has also a ranker smell, without the redeeming aromatic flavour of the *Socotrine*, or those of the *Cape*.

But this aromatic smell, and facility of solution, just spoken of, upon which mainly depend the *mildness* of operation, may be both destroyed by joining the aloes with other substances—deemed incompatible in the horse's body, because the odour flies off upon mixing. Nor do they avoid this kind of disaster, when they adopt the alkaline salts, which reside in *soap* of every kind; and this latter material is employed extensively as the chief vehicle of all description of aloes. Hereby, in time, the *abundant* bitterness of some kinds is corrected, and the operation rendered milder, but the *great gut* (colon) is not always emptied alike completely, on account of the *best* aloes, when thus combined, losing their aromatic odour on mixing and dissolving in the stomach too soon, thereby combining with the food before its purgative effects reach the lower intestine, if it do not take a contrary turn entirely. Therefore, it was that I set myself to obviate the evil of giving a purge on a full stomach, after the manner described in the article titled *Physicking*; and to employ *this vehicle* only when aloes is given as *ordinary physic*, when *the stomach* is presumed to be in a healthy state and little liable to be affected by the action of the aloes; whilst in those cases where this *central organ* of the whole system might be presumed to be already in a state of excitement, I have adopted *treacle* as the vehicle, and recommended it generally, when the horses training into condition require to be purged, have been prepared according to my directions. See Index for *Physic*.

3. Thus, whichever way we turn ourselves, our expectations are liable to be frustrated by combining the aloes with *substances* that do not always agree with all

the kinds of aloes alike; for the alkali also differs in quality and quantity in each description of *soap*, if not in every parcel, and when taken is likely to be affected in one way or other by the actual state of the stomach and bowels; which is such, at times, as to digest the *whole of the dose*, to retard its operation, or to turn aside a large proportion thereof. 1st. To the kidneys; 2d. To the skin; and, 3d. into the circulation of the blood, by absorption;* all which aberrations are known to take place, as we shall have to prove, under the head just referred to.

4. *Barbadoes aloes*, though spoken of as rough and heating in its operation, is only so in consequence of its resisting solution until the major part of the ball has descended to *the colon*, whereby this and the last gut (the *rectum)* are so much excited as to cause a new disorder of the parts—which require sedatives to allay the *protrusion* that ensues. Employing an extra quantity of the soap, when a speedy operation is required, gets rid of this objection to the use of Barbadoes aloes; and as we cannot spoil its odour, seeing it has little or none to lose, we attain another end, by the use of soap in large doses, that of exciting the kidneys to produce an abundance of urine, which is ever desirable when we do not thereby weaken the required purgative effect. True it is, that the Socotrine aloes without the aid of soap (*i. e.* of the *kali* it contains) produces urine, yet this is only effected by sacrificing the purgative quality of the aloes; and, therefore it is that a larger quantity of *the Socotrine* is required than of the *Barbadoes* kind, in the proportion that three bears to two, to produce the same effect. See Index for *Stomach* and *Kidneys*, to show how this communication is brought about. This allows for about one third of the *Socotrine* to be "turned aside," as just observed in the last page; a defection that does not happen to the *Barbadoes aloes*, either on account of

* Undigested particles, as bits of chaff, have come forth on bleeding in the neck. Vide *Veterinary Surgeon*.

their containing less *resin* and more *gum* than the *Socotrine*, or that the *purgative quality* resides in the *bitter principle* which distinguishes the *Barbadoes*. At least, thus we conclude; for, the question as to those proportions, and in which of them the purgative quality resides, is not yet settled by the experimental chemists; nor is the adjustment of such a dispute of much importance to the practice of *Veterinary Medicine*, in which we look mainly to *effect*.

5. *Barbadoes aloes*, then, possesses this triple recommendation, viz. 1. That it affords a safe and certain purgative; 2. That we may rely upon its quality being always the same, except as respects freedom from *dirt*; 3. That a less quantity serves our turn. And this last is adduced, not so much for the *pence* which may be saved by price or quantity, as for the fact (which has already been discussed, in *Conversation* xi.) that the excessive use of this stimulating purgative wears out the horse, if it do not superinduce inflammation of the intestines in four such cases out of five. Neither is the case altered, when the poorer animals, that are *kept* without the means of incurring inflammation, die of *torpor* of the same part, called by us *debility*, or *locked jaw*; or, being better sustained, as to hay and corn, with a constantly-perverted stomach, they go off in vertigo, megrim, or staggers.

6. *Adulteration* of this article, as of all other drugs, is mostly prevalent when *scarce* and dear, and the Socotrine being higher priced than other aloes, we found that kind during the war deteriorated with common resin, thereby rendering the use of this particular kind extremely precarious.

7. *Aloe-balls*. No one is at a loss to make *a ball* from the ingredients prescribed, and this is almost the only form in which aloes can be conveniently administered. A mode of casting the balls in moulds, however, as now practised, deserves to be generally known, as being more convenient, and withal retaining the virtues of the more priceable kind of aloes at the same time. By melting, also, the offensive substances that come to us in the

crude aloes, are got rid of, the mass remains ductile and subtle for a long time, when kept in bladder, and may be cut into doses with a greased knife as the balls may be required. For this purpose prepare a tin boiling saucepan, having an inner tin pot, resembling a joiner's glue-pot, with a cover. Chemists term this contrivance *Balnea Maria*, or Mary-bath; which possesses the advantage of melting any substance steadily, and keeping it in that state awhile, without the chance of its coming in contact with the fire; as would happen were *the boiler* to become red hot, and no water intervening in the outer pot, as in this sort of contrivance.

The *inner pot* has a spout, resembling that of an ale-house pot, with a strainer inside, and a lid of its own size, hanging by a hinge to the *lid* of the inner pot, which in like manner hangs by a hinge to the pot itself, that there may be no delay in shutting out the atmospheric air, whenever it may be deemed necessary to ascertain the complete liquefaction of the contents. Into this pot put the aloes to be melted, with about a sixth of its own weight of *treacle*; or a larger proportion, if the aloes be of the Barbadoes kind, and then set on the boiler. After half an hour's boiling, most of the aloes will be found in a fluid state; when the whole may be stirred down, and the boiling of the outer pot continue until all is fluid. No delay should take place in pouring off the *aloes*, into moulds made of paper, or into a long tin mould, which opens at the side, after being disengaged of the fastening that keeps it together.

This part of the process is to be performed in a close room, and whilst the water boils intensely, lest the aloes *set*, and require being cut out, or be sacrificed to carelessness. The spout must be of good width, as *the strainer* will otherwise choke up with the filth and gourd, that is thus disengaged from the aloes. Should it be deemed needful to introduce the usual aromatic helps—as aniseed, carraway-seed, cummin-seed, &c. *the seeds* may be introduced powdered, as soon as the liquefaction has commenced; so of *ginger* in powder; but the essential oils of the three first mentioned, so often prescribed in

this book for the *cold preparations*, would be thrown away in the present mode of making up aloetic purges *by heat*.

The *medium dose* of aloes prepared in this way is, of *the Socotrine*, for a hunter, 7 or 8 drachms; for a race horse *at strong work*, and full grown, 2 drachms *more* than the hunter: of the *Barbadoes* kind, 5 drachms for the *hunter* in full work; for the *race horse*, 6 drachms, whilst at strong work, and consequently at full feed. I am aware that much larger doses are given, and these combined with substances that accelerate the purgation, or determine the medicine to certain organs of the body. The previous indiscretion of the givers may have rendered such doses necessary; but I know that less will suffice under proper management; and I feel the truth of the maxims elicited in various *conversations*, that the more physic we give the more we must give, to produce the same results, but I knew also that we thereby *wear out* the animal.

Alteratives; medicines which being given in small doses effect the object intended by slow means, as just now adduced in the article *aloes*. *Tonics* are ever employed in this manner, diuretics seldom, and purgatives only when the subject is tender, or is just come out of a fit of illness; they are then termed laxatives. Many grasses act alteratively upon the system, and it is in this respect that the *turning out* to soil is found beneficial to the horse's constitutional vigour. Bran-mashes and weak gruel also effect all the good they do by gently disposing the digestive functions—on which all others depend, to resume their healthy action. See *Laxatives*, *Diaphoretic*, *Diuretic*, and *Tonic Prescriptions*.

Attenuants. Medicines are so called that thin the blood, and induce the humours to run off; in which manner of acting the diluents may be considered as attenuants also. Water is a good *natural attenuant;* it follows, of course, that denial of water must occasion the blood to thicken. *Nitre* powdered, and given with the corn, cools the kidneys and produces urine by a directly different

mode of operating than aloes and soap—the one irritating, the other allaying the disordered action of those organs. *Bleeding* also attenuates.

No. 1. Nitre ..... 4 drachms,
Camphor ..... 1 drachm,
Aniseed ..... 10 drops, with meal and mucilage to form the ball for one dose: give two or three days, successively.

No. 2. Nitre ..... 2 drachms,
Honey ..... 2 oz.
mix in white water, and give twice or three times a-day. Good for a troublesome cough.

No. 3. Sea-onion, fresh ..... 5 oz.
Vinegar ..... 3 lb.
Simmer these a day and night in a warm corner in a close vessel; press out the liquor, and after it becomes clear of fæculencies, add of
Rectified spirits ..... 6 oz.
Excellent in all affections of the lungs, and diuretic also.

Ayls. The vulgar pronunciation of *Oyls*, a favourite remedy, as they chose to think it, among the old farriers; but which, in nine cases out of ten, *destroyed* the parts to which the mixture was applied, without raising a blister. It was composed of nearly equal quantities of oil of vitriol, oil of turpentine, and linseed oil.

Bilious pills for *the groom*, to cleanse his stomach, &c. after feeding too much.

Extract of Colocynth ..... 1 drachm,
Hard soap ..... 1 scruple,
Jalap ..... 1 scruple,
Gum-guiacum ..... 4 scruples,
Tartarized antimony ..... 4 grains,
Oil of carraway ..... 10 drops, mixed with surrup of buckthorn, to make thirty pills; two are a dose.

Balls. The favourite mode of giving physic of any kind to the horse, and should be made up as they are wanted, as their virtues decay by long keeping, and the aromatics and spices, with which the nauseous part of

the prescription is disguised, lose their scent. We employ bullocks' bladder to obviate this deterioration, and may mention three or four days to ten days or a fortnight, as the extent at which we may safely reckon upon their virtues. Under the article *aloes* I have described the manner of casting purging balls of that material.

Bark. All the barks of trees are found to possess a tonic quality, the *peruvian* being the finest, the best got, and in most general use. But *cascarilla* is found to have stronger powers, and therefore preferable in horse medicine. Although some affect to question the effect of bark on the horse, no doubt remains that these and all bitter vegetable productions have a tonic quality, and are to be preferred before the preparations from mineral substances. The dose varies from ½ of an ounce to double that quantity, requires perseverance, is chiefly desirable after fever or internal inflammation, and should be given in a drench, if it be required to operate upon the stomach. But they obviate this by making the ball of easily solvent materials. [See *Tonics.*]

Bleeding has been often spoken of, as being frequently undertaken unnecessarily. Refer to INDEX, under this word, and *Pulse*, and recollect never to bleed unless you can assign some satisfactory reason for the operation. The heat under the tongue is a good indication of its propriety; as is, also, *fulness of blood*, when the artery can scarcely be felt by reason of the patient being thick-skinned, as is the case with the lower descriptions of horses—which seldom require bleeding. Most heavy animals also evince the necessity of bleeding by the anxious manner of the eyes; the conjunctiva being swollen, and feels rigid on the touch.

Blistering. As an application for drawing off internal inflammation to the surface, this remedy has been *spoken of*, at various times, in the foregoing pages, as much superior to rowelling, or setons, the efficacy whereof have been justly doubted: as regards the better bred horse, these methods are totally inapplicable. Blistering has never been employed in the form of plaster, that

I have heard of, though I see no reason why, unless it be the difficulty of devising effectual bandages, in which service the people of the stables are usually so inexpert. Therefore should the operator guard the hand in the vigorous application of any of the following—

Blister Ointments.

The mildest receives the term "embrocation" from the effects being apparently less severe, viz.

No. 1. Flour of mustard ..... 6 oz.
Water to mix to the consistency of paste; that is to say, the mustard of the culinary art. This may be converted into a mild *blister* by adding
Oil of turpentine .....2 oz.
Water of pure ammonia .....1 oz.; mix, and apply to the sides, the chest, or to the region of the kidneys, as either may be affected; *always* performing this part of the office with much assiduity.

No. 2. Lyttæ, powdered, 4 drachms,
Venice turpentine 1 oz.
Hog's lard.....4 oz.; mix for one application.

No. 3. Oil of turpentine ..1 oz.
Vitriolic acid.....2 drachms, to be poured carefully on the turpentine, in an *open place*, then add
Lyttæ, powdered, ..6 drachms,
Hog's lard.....4 oz.; mix.

As it sometimes is thought adviseable, after rubbing on the ointment, to plaster on a portion with the knife, melt wax 2 oz. then mix it with the turpentine first, and add the other ingredients subsequently, as they stand in order, and reducing the quantity of *lard* to 2 oz. The next form, which is still stronger, may also be rendered more consistent, by the addition of *wax*.

No. 4. Barbadoes tar .....1 oz.
Oil of bay .....2 oz.
Mercurial ointment .....1 oz.
Lyttæ, powdered.....1 oz.; mix.

Either of the foregoing are adapted for reducing swellings of the back sinews and other lameness occasioned

by hard work, strains, and bruises, after the inflammation at the part has a little subsided. Repetition will be necessary, in general, for spavin, windgall, and curb; and for these, as well as every other part, the hair should be clipped close. Remember that the flies (*lyttæ* of the three last formulæ) be *very well powdered*, and sifted, as much depends on the intimate admixture of this main principle of blistering. When the pimples rise, the horse will endeavour to bite the parts, which, if permitted, would raise an indelible blemish, besides blistering the lips: let him be tied up short, or wear a cradle; with the two following, this precaution is imperatively necessary, by reason of the exceedingly great irritability of the ingredients, without which quality they would ill perform the object sought by the application—namely, to remove ringbone, splent, bone spavin, or other enlargement of bones.

No. 5. Mercurial ointment ..... 3 oz.
Oil of origanum ..... 3 drachms,
Euphorbium, powdered ..... 3 drachms,
Lyttæ, powdered ..... 4 drachms; mix.

No. 6. Mercurial ointment (old and strong) ..... 3 oz.
Corrosive sublimate, levigated 2 oz.
Oil of origanum ..... 2 drachms,
Lyttæ, powdered ..... 6 drachms; mix, and use with caution. Both these last have the effect of destroying the hair permanently; an unsightly blemish we must submit to, if we would preserve the services of the horse.

No. 7. Take of the preceding, and dissolve the sublimate in
Nitric acid ..... 2 oz.; then add the other ingredients, and you have as strong a blister-ointment as can be required for reducing the enlargement of bones just spoken of.

*** All these prescriptions should be prepared with great care, the *flies* requiring to be very finely powdered and well incorporated; whilst the effervescence of the acids must be guarded against by the compounder. The

patient's bed must be shook out, and covered afresh, in order to guard against the small portions of blister-ointment which may fall upon it, and raise a blister on the body where it may not be required.

Blue Pill (The). [See *Mercury*.]

Bran-mash. [See *White Water*, No. 2.]

Broken knees. Whenever this accident occurs, or whatever the quantity of damage inflicted, a great contusion has taken place, although the skin be scarcely abraded. Therefore is it very desirable that remedies be applied as soon as possible, and that the horse is laid up *at rest* immediately, for some of the reasons adduced in Conversation ii.; where we discussed the trivial cause of permanent lameness in the higher breed of horses, to whom every act of progression is then exceedingly detrimental.

Brushes and the curry-comb have been spoken of (pages 19 and 188), and to which let me add the following account of a newly-invented one, for the utility whereof I cannot vouch at present.

Horse-brush. A pamphlet, published at Paris, by M. Goëtz, recommends a substitute, of his invention, for the twist of straw commonly used in dressing horses. The brush, which the inventer dignifies with the title of *brosse hygiènique*, is an imitation of the kaffah, or brush of the Arabs. [Qy if *kaffah* is not *a horse*?]

It is composed of a tissue of horse-hair, enfolding a pad of the same material, banked by thin iron plates, and covered with varnished leather. It is, moreover, furnished with a strap across, the width of the back, like an ordinary brush. The web which covers the pad, which is equally flexible and strong, it is averred, penetrates the hair and to the hide of the animal better than any other instrument, and removes all foreign substances, however minute. The size is the same as the usual horse-brush, covers an equal portion of the surface at a time, clears out all the cavities, in passing over them, and, on this account, accelerates the process of dressing.

Calomel. [See *Mercury*.]

Camphor. This gum is one of the best articles

employed in veterinary medicine, on account, chiefly, of its *anti-spasmodic* quality, which it effects by *allaying* the heat and irritation of which the horse is remarkably susceptible, wherefore it is employed in arresting the progress of excessive purgation. It acts upon the skin, also; and, in the form of a *tincture*, given in gruel, is antiseptic; a quality it must derive as much from the warmth of the spirit as to the *complete solution* it thus undergoes; for, be it known that (notwithstanding the brief eulogy just pronounced) scarcely any medecine turns so completely round upon the slovenly compounder, who should administer the camphor before it be fully dissolved, and thereby farther *excite* the already inflamed stomach and bowels, instead of alleviating the pain. But the spirits of wine, which it is necessary to use in all preparations of camphor, for its solution, being for the most part incompatible with the purposes for which it is administered, must be used sparingly; and particularly in cases of inflamed rectum and excessive purging, in which I have employed it as a sedative addition to the clysters that then become needful, a *few drops* of the spirit must suffice, and then pounded in a mucilage of *accacia*.

If over-dosed, the patient will be thereby submitted to great danger; the *weak inside* and *tender* horses being least benefited by the exhibition of this excellent medicine; as will, also, such as have been much reduced by disease, by misusage, or by old age. To this latter circumstance let us in charity attribute the failure of camphor reported to us by Bracy Clark; the stomach of an animal that awaits the knacker's axe being ill calculated to make a fair experiment upon.

A *herb*, serving the purpose of camphor, is obscurely mentioned for its opiate virtues by some writers, and which the sagacious animal would, no doubt, select while in a state of nature. This, however, I apprehend is no other than the *lettuce*, mentioned below under that *head*.

Camphoretted Spirits, for strains, bruises, and swellings. When applied immediately, the solution of camphor, in spirits of wine, will be found sufficient to

repel a slight accident, which, if neglected and the horse worked on, renders strong blistering necessary. I have reason to think that when horses in training fall lame on the downs, the instant application of camphoretted spirits would alleviate, if not effectually remove, the lameness in a short time.

No. 1. Camphor..... 1 oz.
Spirits of wine ..... 2 oz. dissolves at once.

But the employment of soap, as it adds to the consistency of this embrocation, enables the operator to employ much rubbing, which is itself a good aid in reducing the swelling, the heat, and the pain; therefore, to

No. 2. Camphoretted spirit as above, add
Soft soap..... 2 oz.
Solution of ammonia .. 1 oz.; mix, or increase its power by the addition of
Oil of turpentine .... 1 oz.

Cover the part, usually the leg, and oftenest of the back sinew, *walk* him to stable, or, being there, let him rest awhile. See to his evacuations; give a purging ball; and, if a bad case, recourse must be had to the fleam. When the patient is found somewhat recovered, give him a loose stable; vary his diet, if you do not adopt *the cooling regimen*. Walking exercise, in hand, is highly serviceable as the lameness goes off.

2. A very small variation of the above materials produces that very useful domestic application, *opodeldoc*, which may be employed instead of either of the foregoing, with advantage, on high-bred cattle of thin skin and very sensitive.

Camphor..... 1 oz.
Hard soap ..... 4 oz.
Oil of rosemary ..... ½ oz.
Rectified spirit..... 8 oz.; pound the soap, and mix with the spirit; dissolve the camphor therein, and mix. Apply extensively twice or three times the day of the accident.

Castor oil. Recommended in cases of dangerous constipation, to precede bleeding; as, also, in severe in-

flammation of the inside, to follow bleeding, when the exhibition of aloes would perpetrate farther mischief. In other respects *castor oil* is not an eligible medicine. The dose is from one pint to two pints. When delay would endanger the horse's life, as happens when he tumbles down through hardness of the dung, causing *staggers*, olive oil, i. e. *salad oil*, may be substituted in larger quantity by one-half.

Clyster. These are either *laxative*, or *sedative*, or simply *emollient*, and the basis of all is *thin water-gruel*, milk warm; though, for the latter purpose, when the rectum requires only to be softened and soothed, *warm water* may suffice; as it must, also, when the danger to be apprehended from *hardened fæces* is imminent, and delay would be ruinous. Laxative clysters are rendered so by the addition of table salt, or Epsom salts, to thin water-gruel, or any purgative—as aloes in solution. The sedative clyster acquires that quality by adding to

Thin water gruel.....3 quarts,
Camphor.....4 drachms: *inject.*

The camphor will give out its anodyne quality by the *heat* of the gruel alone; but where spirits of wine is at hand, a few drops readily procure complete solution, and when any of the lump remains, in either case, the animal may be figged with it. If the camphor offend the gut, it will be expulsed in a few seconds and need not be lost. See *Camphor*. A bullock's bladder and pipe is the usual mean of injecting clysters; but I hear of an instrument being offered for sale in the form of a syringe.

Colic may be relieved by employing a *clyster*, as follows:—

Oil of turpentine.....4 oz.
The yolk of two eggs, beat up—mix,
and add to,
Thin water-gruel.....3 quarts: inject.

Colt's foot decoction, for curing cough, cold in the lungs, hoarseness, and other affections of the throat and chest. The colt's foot leaves, gathered in May and

dried, will be found to remove any such affection, to which *the people* about stables are very liable in the winter season. Let the leaves be made in a pot, in the same manner as tea, and kept simmering a few hours; sweeten with coarse sugar, and sip it, cold or warm, ten or a dozen times a day. If ten drops of paregoric elixir, i. e. *Opium*, be added to a table-spoonful of the decoction, the most troublesome cough is removed by it.

I have not attended to the administering of this safe and admirable simple to the horse; but in a case of catarrhal inflammation, I rely upon the report made to me of its complete success.

Cooling decoction, called also the *linseed* decoction.

Linseed ..... 3 pints,

Water, boiling hot, ... 6 quarts, poured on the seeds, and let it simmer five or six hours; then pour off, and add *honey* 10 ounces, or brown *sugar* double that weight, and give at three or four drenches in the course of the day. Repeat, if need be. But if the patient droops, and is off his feed, evidently from the effects of this *cooling lotion*, add thereto, of

bitter extractive—as much as he will take *freely*, i. e. without refusing the linseed; or, more readily, the Extract from *hops*, ... 2 oz. or more,

mix the hops with the linseed before adding the water.

Cooling regimen. [See *Regimen.*]

Cordials. Enough has been already said of this class of medicines; *one day* having been devoted to a *conversation* on the abuses of cordials, as well as their proper application. In the form of *balls* is the ordinary manner of giving cordials; but, as they are given invariably almost with the intention of restoring the tone of the stomach, (i. e. its appetite,) and to invigorate the animal, this would not seem the most eligible, were it not for the facility with which the materials dissolve.

No. 1. Carraway seeds, Aniseeds, Cummin seeds, } powdered, each, 3 oz.
Ginger ..... 2 oz.

Oil of cloves ..... 20 drops; mix,
with syrup enough to form into four balls.

No. 2. Ginger, powdered ..... 2 oz.
Carraway seeds, powdered ..... 4 oz.
Oil of carraway ..... 1 drachm,
Oil of aniseed ..... 1 drachm,
Liquorice powder ..... 4 oz.; mix,
with honey or treacle enough to form into five balls.

No. 3. Liquorice powder ..... 1 oz.
Gum ammoniac ..... 6 drachms,
Balsam of tolu ..... 3 drachms,
Powdered squills ..... 2 drachms;
mix with balsam of sulphur for two balls.

2. *Cordial drenches*, medicinally compounded, would prove extremely inconvenient to carry about, as most travellers and thorough good fox-hunters do the *cordial ball*; nor are they so elegant a form for administering as the latter: but whoever is at a loss for this class of medicines when his horse knocks up, or is worked *off his food*, will always find it in a quart of strong ale or beer, a bottle of sherry, or any article of that kind, made warm, with an ounce of powdered ginger in it. Another of those "always ready" things is the *White Water*, No. 5; a ball or quantity in mass being supposed to be always at hand. It is, in truth, one of the best remains of the old school, judiciously used. [See, also, *Daffy's Elixir*; and *Cordials*, in INDEX.]

Daffy's Elixir. Given to the horse as a cordial, but sometimes very improperly so, though drowned in a large potion of oatmeal gruel. But for *man*—the groom himself, who may have been exposed to the rough elements, to cold, or is griped after such exposure, or after taking green vegetables; or if he become costive *in winter time*, then *Daffy's Elixir* is to him a veritable cordial and purgative, that has a thousand recommendations. If he be *aged*, habituated to dram-drinking, or shiver after being *out*, (and no prospect of a stool that day,) let him take a table spoonful of the following:

Infusion of senna ..... 3 oz.
Tincture of senna ..... 3 drachms,

Tincture of jalap ..... 4 drachms,
Tartrate of potass ..... 1 drachm,
Syrup of senna ..... 4 drachms;
mix, and give the horse in oatmeal gruel. [Vide *White Water*, No. 4.] N.B. The infusion will occupy a week: let it stand (in an earthern vessel) simmering in the chimney-corner: the tinctures are made of brandy, in which the senna, &c. are to be concocted a few days.

Diaphoretics, i. e. *Sweating balls* and *powders*, which see.

Diapente. A stomachic powder that is given in the corn, but, when the horse will not take it so, it may be mixed in a quart of white wine, or ale, and given in a horn warm.

Myrrh,
Gentian,
Bayberies,
Berthworth,
} of each 1 oz. powdered.

Digestive Ointment, for sores.

Turpentine ..... 5 oz.
Mutton kidney fat ..... 4 oz.; melt over a moderate fire; and, when nearly cold, stir in, with a wooden instrument,
Red precipitate, powdered .... 2 oz.; mix well.

Diuretics. Alterative medicines that stimulate the kidneys to secrete urine; though not always advisable when these organs are already too much stimulated, and, if greatly so, must prove ruinous, as was before said, under *Urinary passages*. The powder No. 1, however, is calculated to allay any undue stimulation, whilst it is equally calculated to reduce swellings of the legs, grease, &c.

No. 1. Camphor ..... 5 drachms,
Nitre ..... 3 oz.; mix
for four doses, and give one powder per day.

No. 2. Yellow resin, powdered, 2 oz.
Nitre ..... 2 oz.; mix
for four doses, as before.

No. 3. Powdered resin ..... 2 oz.
Hard soap ..... 6 drachms,

Prepared soda, powdered, 1 oz.
Liquorice powder ..... 4 drachms,
Barbadoes tar, sufficient to make

the whole into six balls, one to be given daily.

If given too strong, diuretics stimulate the bowels and pass off by stool, leaving the kidneys unaffected. This is eminently the case with turpentine, (the oil,) which, given to the amount of three or four drachms daily, (made into balls with meal,) is gently diuretic, whereas double that quantity loosens the bowels at once.

Dutch drops. Very eligible for recent incised wounds and broken knees. It is nothing more than the residue left in the still after the purification of oil of turpentine by redistillation — when the one acquires the new title of "spirits of turpentine," the other is "balsam of turpentine," or Dutch drops.

Embrocation. Stimulating external applications, next in order to blistering. See *Camphoretted spirits*. The *mustard embrocation*, at page 231, is an excellent remedy for drawing pain from the interior to the surface, for strains, and for dispersing swellings.

Expectorants were referred to at page 180, &c. as calculated to relieve affections of the windpipe: this good may be brought about either by a sedative or by causing the fluid secretion to pass off by the bladder.

Ball No. 1. Camphor ..... 1 drachm
Aromatic powder ..... 1½ drachm
Balsam of tolu ..... 1 drachm
Sea onion, powdered .... 1 drachm; mix with honey enough to make one ball.

No. 2. Gum ammoniac ..... 4 drachms
Sea onion, powdered .... 1 drachm
Hard soap ..... 2 drachms; mix with honey enough for one ball.

Fever powders. These are all preparations of *antimony*, or, rather, the same under various names. See antimony. Previous to giving either, the febrile excitement must be reduced by laxatives.

No. 1. Emetic tartar ..... 1 and ½ drachms, once

or twice a day for a week or ten days. If the heat be great give

No. 2. Unwashed calx of antimony··2 drachms,
Nitre, powdered,····· 1 drachm, *mix*,

and give once a day for a week. Should the bowels be disordered, change the admixture to

No. 3. Powdered nitre·····2 drachms,
Emetic tartar ·····3 drachms,
Camphor ·····2 drachms, mix

for two doses.

This, although the strongest, will rest easiest. Give for three or four days.

If the form of *ball* be more desirable, employ linseed-meal and syrup, for that purpose. Those are essentially the same as Dr. *James's fever powders*, so long celebrated in human practice, but which we find are not made up according to the specification. Although slow in operation, those powders show their good effects on the skin of the animal, and this points out the necessity of clothing the sick horse, particularly about the belly, whilst the physic is in him.

Grooms' diseases. 1. Under "Daffy's Elixir," I have already *supposed* one of the most general causes of disorder to such men as are much abroad, *in all weathers*, and prescribed the *elixir* for it by way of ready cure. But there are other and various ways in which men placed in these situations are exposed to ailments that may be got rid of, or prevented from *making head*, by using one or other of those approved remedies to which I am about to refer. 2. He is very liable to taste too many of the good things of this life, or *too much* of some one or more of them: then let him take the "Anti-Bilious Pills," (prescribed in a preceding page, 229,) according to the directions. 3. Is he subject to costiveness? He cannot do better than take, of an evening, a small pill of the *aloes* directed to be *casted* at page 227, of the size of a gray pea. 4. Is he troubled with an habitual cough, he should put a *lozenge* into his mouth occasionally—always, indeed, at *going out* in raw weather. 5. A cold in the chest, in the throat, a hoarseness, and

a cough, caught by exposing the neck, is much alleviated by sipping frequently of decoction of *Colt's foot*, and refraining from strong beer, spirits, wine, and things of that nature; it may be cured, radically, by a continuance of the same simple means, and immediate relief and rest may be obtained at night by adding thereto the *opium* mentioned at p. 236. 6. Has he the *lumbago*, a few drops of "Turlington's balsam" removes it at the second taking, nearly; should this not succeed, then 'tis not true lumbago, but old age, which afflicts our groom and huntsman, and he must *give in*, ride no more, prepare to meet Tom Moody, and be content with the life and runs he has enjoyed so long. 7. If, instead of thus "cutting his stick," he may have cut his hand or foot, or ——— *Dutch drops* is the thing he may rely on for a speedy cure. 8. Do the boys, or the lads of the stables, get kicked, bruised, or contract chilblains, let him then mix *opodeldoc*, as we have directed under that head, page 234.

Hay. Almost every one who has the care of horses is so good a judge of hay, that it would seem superfluous to describe the fragrant fine grown grasses as the best for this kind of dry provender; and, indeed, for the better description of horses, any other would prove destructive, by inflaming the bowels, unless precautions be taken to counteract the effects of coarse or ill-gotten samples. We have spoken to the same purport at various times in our *Conversations*, (see INDEX,) and now enter upon further details.

2. If *the hay* given to horses were manufactured of the grasses which they would eat in the field, no harm could accrue, as far as health is concerned; whilst the advantage of housing in unfavourable seasons would be added to the certainty of a belly full when no grass can be found. But it happens, that many grasses of very different qualities compose the dried article which acquires the general name of *hay*, some of which our high-bred horses reject altogether, whilst others are absolutely deleterious to the tender, the valetudinary and the irritable of our first, second, and fourth classes of horses (page 114).

At grass, the horse leaves many of these behind untouched; the famed *daisy* and *gilded cup* having no attractions for his palate; but when the mower comes he humbles the whole produce of the field in one common mass, and the dried provender is served up to the horse of every temperament, and under all circumstances, for his ordinary food. But it not unfrequently happens, that such hay is, moreover, *ill got*, that is to say, it retains too much succulence in the *stalks*, which produces a fermentation that in some measure corrects the original objection.

3. *Mow-burnt* is the natural operation just alluded to, and if not extending so far as to decompose the finer particles of grass, reduces the rougher fibres to mellowness, and renders the hay more palatable to the horse, though we believe not so to all hay-feeding animals alike. 'Tis true, that mow-burnt (or rick-burnt) hay, occasions the horse to crave for water more than he would when fed on bright hay, and therefore renders it an improper quality to be given to the *second class* of horses, (see page 114;) whilst, on the contrary, for horses of the fourth class, "suspected of *small stomach*," which we would distend, no better means can be employed to attain that end, than giving this same mow-burnt hay salted, and, upon his craving for it, as much water as he will take.

4. *Mow-burnt hay*, however, as well as rank, coarse, or otherwise ill-gotten, may be so far gone, as to become the harbinger of diseases without end; the former having lost all its succulence, the latter hard of digestion, and offensive. In frequent instances we have already noted the evils to which these give rise, and will not here repeat them. A further corrective of such ill-gotten hay is found in the free use of salt, and salting it by the process described under the head of *Salt*—paragraph 3.

5. *White clover*, or any of the trefoils, are good cheering fodder for a short time, to be given to horses convalescent from visceral inflammation, or fever. Its

quality of putting on flesh, or superinducing pursiveness, is no discommendation to a weak and yet ailing animal—to whom change of diet and coaxing to eat, is desirable. Indeed, the great succulence of some grasses, and plants, and roots, are their greatest recommendation in all such cases, however we may doubt the propriety of giving them for a continuance in full health. Speaking of the natural verdure of the earth, a late traveller in Switzerland says, "It is not grass, nor is it turf, 'tis neither green sward nor old sward, but an endless variety of salad throughout." So that what we may deem *the only proper grasses* are not indispensable altogether.

Hydrophobia. The popular name for canine madness, *(rabies canina,)* in every stage, but which would only be properly applied when this has reached to the symptom of *dreading water*. Up to the present writing, (June 1828,) no specific for the cure of this disorder has been discovered; excision of the bitten part not being always an equally efficacious preventive of the genuine disease in man or beast; so that the best we can do, as regards it, is avoidance, and watching the approach of *rabies* in its earliest stages. *Horses*, more than any other animals, are the objects of attack from the more ferocious kind of dogs in street or road, whilst in the stable and yard, the most sociable dogs, being infected, fly at their old friends and companions with blind fury and snappish manner. But when this happens the information is worth being treasured in our memory, that the horse does not seek to propagate the dreadful malady, nor is his bite infectious, as the following *case* will go to prove. Mr. R. proprietor of a short stage, having a pointer in his stables, at Paddington, the creature was ascertained to have gone mad, and was shot, in August, 1824. A few days after, one of his stage-horses being ill, and *the doctor*, not knowing aught of the case, ordered a ball, which Mr. R. was in the act of administering, when the horse bit the balling-iron and Mr. R.'s hand so dreadfully as to cause serious apprehensions of the result. Nothing has come of this accident, how-

ever, to the sufferer, though the animal beat itself to death the same day, and three other horses on the same work were subsequently lost in a similar manner.

Mr. Huzard, who has written in France three large volumes on Veterinary Medicine, claims to be the first who noted that horses, sheep, and cows, do not communicate this appalling disorder. Camphor has been tried in a well marked case of rabies, with complete success, as we hear. The doses is, for *the first* day.

Camphor.....1½ drachm,
Spirits of wine.....2 fluid drachms, dissolve the camphor herein, and rub down in acacia mucilage: give in
Water-gruel .....2 quarts, twice a day.

Increase the quantity of camphor by half a drachm each day, until the dose reaches three drachms.

Laxatives, as before hinted under the head of *Alteratives* and *Aloes*, (pages 223, 228,) are commonly *purgatives* divided in small doses, and given daily. This mode of evacuating the bowels is most eligible for horses with tender insides. The subject has been spoken of at large, under *Aloes*, *Green Food*, *Physic*, and *Purgatives*. Consult INDEX.

Ball No. 1. Aloes..... 2 drachms,
Calomel.....15 grains,
Hard soap ..... 2 drachms,
Oil of carraway.....20 drops; mix for one ball.

No. 2. Domestic salt..... 4 oz.
Water gruel, *warm*. enough to dissolve it,
Salad oil ..... 6 oz.; mix for one drench.

No. 3. Laxative drench to loosen the body previous to bleeding, when the dung is uncommon hard, as, also, in febrile disorders:—
Castor oil..... 1 pint to 1½ pints.

Lettuces. The white and red *cos lettuce* have been raised on a large scale, by the drill husbandry culture, as food for swine, and particularly for suckling sows.

The *lettuce* contains a good portion of the principle of opium, which a druggist in London (Mr. Battley, of Fore-street) extracts, and sells under the name of sedative liquor of opium. With this recommendation as a vegetable sedative, its services as an adjunct in the *cooling regimen* is no longer doubtful; though we have yet had no opportunity of trying the lettuce on a large scale nor alone, no difficulty exists in coming to the conclusion, that it may be used with advantage, when to be procured in sufficient quantities at clearing away of any extensive kitchen garden-ground, which generally occurs most opportunely when visceral inflammation is most prevalent - namely, towards the end of the summer. [See *Hay*, paragraph 5.]

Linseed Decoction. [See *Cooling Decoction.*]

Lotions. The *cold lotion* for sprains and bruises, most readily procured by ordinary people, is *vinegar*, which may be applied alone, by rubbing the parts; but which may be rendered still more effectual thus:—

No. 1. Vinegar .....4 ounces
Goulard's extract .....2 ounces
Water .....1 pint,

mix, and apply well. Cover the parts; and in two hours repeat the same; then soak a cloth, or the end of a *bandage*, two yards, or more in length, and the width of three or four fingers, in the lotion; pass it round the leg (let us suppose) spirally from the lower part upwards, and make fast with a pin or a stitch. If the horse evince increased uneasiness, open and rub the *leg*; at least let it be looked at in four or five hours, and replaced. When the part becomes very cold, as it will, add to the above—in proportion,

Camphoretted spirits .....4 ounces,

Mix and apply as before.

For cleansing old ulcers, take,

No. 2. Nitrous acid .....4 drachms,
Copperas .....1 ounce,
Water .....8 ounces; mix.

Mangel Wurzel, now tolerably well known on all large dairy farms, is a root of some size, introduced here

about the year, 1788, as the "root of scarcity," by Dr. Lettsom. Whatever its succulent recommendation may be for milch kine, to whom they give it three or four times a-week, in times of *scarcity*, it never can be presented to horses of any breeding, however prepared by *sweating* (*i. e.* trenching), without great peril, though I hear of farm-horses having taken small portions and escaped.

2. Since the foregoing was written, I hear of the root being employed in foddering working horses, by *Mr. Evans*, of Caermarthen. His were the hardy horses of the principality, which, he says, are never treated with corn; and the reverend gentleman contrived to keep his faithful servants even without *hay* occasionally, by substituting a mixture of this root and straw, salted with brine. [See *Sali.*] Further, we find that *mangel-wurzel* root is used as a substitute for *carrots*, when these fall short: thus verifying a claim to its second title as "the root of *scarcity*." It should, however, be very well sweated for the horse, and then not given for several days in succession, nor alone any day. The tops are exceedingly succulent; are used as a potage, by man, instead of *spinach*, which it much resembles; and is also given largely to cows, sheep, and swine.

Mercury. The quicksilver of the shops is too well known to require description. Bright, ponderous, and cheap, adulteration or mistake in the purchase is not probable. Powerfully solvent of animal matter, in every form of administering it, much caution must be employed in using this mineral,—the mildest being as *corrosive sublimate*, rubbed into the flanks or inside of the legs, for affections of the skin, for glanders and farcy, to the amount of two drachms, per day: but, being a rank poison, must be employed with care by unskilful persons, who should be advised *to begin* with less than half that quantity, to watch its progressive effects, and to guard against *accidents*. For example, when so applied the patient's head should be *kept up* in a cradle, or haltered short, especially when applied to broken knees, or old ulcers that he can easily reach with his mouth. Again, whenever *mercury* is given internally, a clyster should be injected,

as well as when 'tis found necessary to *rub in* the sublimate for a long time, whereby the stomach and bowels are frequently affected, and the animal droops his head. If very bad and salivated, discontinue the mercury and give aloes, three or four drachms, unless the bowels be already loose and the rectum affected; in which case, instead of aloes give *opium*, from half a drachm to one drachm, in a ball, and inject a clyster of warm gruel, in which camphor, two drachms, is dissolved, or the lump inserted at the part. [See *Camphor*.] When the horse is put upon *a course of mercury*, in any form, he should be *well kept* on nutritious diet, without any green food, and none of the warm water or other liquids so strongly recommended by the doctors; as the first will gripe the bowels, and the warm mashes are insufficient to keep up his stamina, under the operation of this particular physic; though this practice be proper enough with every kind of medicine besides. Another rule to be observed on giving mercury is, that the legs be assiduously hand-rubbed daily, and the patient kept clothed, especially about the body: but not with the thick woollen material mistakenly employed by most grooms. In summer stout linen body-clothes, hood, and neck piece are sufficient, unless the course of mercury has been continued three or four weeks, when a rug may be added. The horse should also be partially stripped, wiped down well, and reclothed, piece by piece, beginning with the hood: walking exercise is all the work he should be put to.

Calomel is the prevailing form in which this mineral is employed in horse medicine, because of its supposed mildness in operating; though we find the muriate of mercury, as *Pilulæ Hydrargyri*, or blue pill, equally efficacious, when employed as alterative medicine, in doses of half a drachm, and given with aloes, about half the usual quantity. But when so employed, the preferable mode is to give the mercurial ball in the evening, twelve hours before the aloes (without taking the horse abroad), whereby the hard lumps of dung, which may have escaped former aloetic purges, are softened, and

disposed to come off, when the aloes begin to operate. When thus combined with a purgative the horse will not require to be prepared with bran-mashes, as directed on other occasions of physic giving.

Nitre. [See *Diuretics, Fever-Powders.*]

Physic, in its most extended sense, means *any medicine* given with *the hope* of curing or alleviating diseases. *Physic*, however, if generally understood to mean, in the stables, *purging physic*,—and *aloes* is that which is meant, if no other is specified. The propriety of administering *regular physic*, or *routine physic*, at given intervals, has been discussed in the foregoing *Conversations;* and, doubtless, if we would have the horse come out of hand in a fit condition for quick work, we must, above all things, prevent his putting up flesh, which would most assuredly retard his *going*. Yet, as the racer could not *last* to the end of his course without great strength and firmness of muscle, he must be fed on hard meat, and undergo strong exercise, to give him those qualities: and these impose upon us the necessity of physicking. Our next affair is to devise the means of producing this excitement with least injury to the vessels upon which the medicine operates. I very well know how it happens that *routine physic*, every eight or ten days, is found to act upon the several inhabitants of a stable so nearly alike, inasmuch as they have all been fed alike; as also, that the immense doses, which such *regular recurrences* render necessary, perpetrate so little harm as "the destruction of one horse in five;" according to a cotemporary writer, who takes into his estimate every class and description of horses they deem it necessary to "physic" regularly.

2. *Preparing the horse* for receiving such doses, in the manner spoken of below, is found to lessen the evil in great measure; and the following *Scale of Proportions*, in which *aloes* may be given, with the well-grounded hope of obtaining the desired effect on each kind and description of horse, in health, presupposes the horse has been so prepared by mashes. The Barbadoes kind are here understood, and those made ac-

cording to the formula directed at page 226, for casting aloes.

For a delicate blood horse ..	4 drachms of aloes,
The same, in strong exercise.	5 to 6 drachms,
Robust blood horse, of class 1 and 2 (page 114).....	5 drachms,
The same, in strong exercise.	6 to 7 drachms, or more.
Hunter, under the like circumstances, three quarter bred.....	add 1 drachm more,
Road-horse	5 to 6 drachms,
Stage-horse, on dry food....	6 to 7 drachms.
Waggon-horse *(having no green food)*.....	1 oz. to 9 drachms.

These *proportions* extend to every variety of bodily state, but the amount of all must be enhanced when the individual has been *long inured to the use of aloes.*

3. *Over-physicking* has been spoken of elsewhere, [consult INDEX for *Physic*]; but does not always consist in giving *too much* of the purging material at any one time, but in giving too often, and frequently in the *mismanagement* of the animal *after* giving the physic; either of which produces a disorder we recognise as "over-physicking," the *symptoms* of both being the same. These symptoms develope the disorder, by evident griping and distension of the abdomen, refusal of food, and hanging down the head, or *drooping*, as one of our *foregoing conversationists* has it; throwing up his tail, without ability to evacuate. (wherein great danger to his life is indicated,) and mortification is to be apprehended. In this case, the straight gut is to be emptied with the hand (back-raked); clysters of water-gruel, with linseed-oil or olive-oil, are to be thrown up; and the patient be induced to drink of the *White Water*, No. 2 or 4, or simple warm water, if those be not ready, as much as he will take. Whoever proposes to give the sufferer a cordial drench or ball, under those circumstances—knock him down, and cast over him, with suitable epithets, his own "warm ale with gin in," and his balsams of Peru and capivi, and oil of amber, and

as much more of this genus of stimulants as he may have prescribed; for the fellow, be assured, has been the death of many a horse.

4. *Over-physicking*, however, exhibits another and quite different result generally, by *excessive purging*, and the protrusion of the *anus*, of which we were talking in another place (pages 110, 137). After purging, and before the bowels are well settled—or, as they abridge it in Berkshire, before the horse is *set*, grooms universally put the horse on full feed, that is, within a few hours of the bowels being in the utmost state of combustion, they are refilled with dry hard meat, that descends and occupies at once the empty canal. The consequences are obvious: if the horse's inside has been emptied by reason of *much* dung having previously distended them to their utmost, and I will suppose somewhat injuriously, then must this new visit afford no sanitary feeling; digestion having to be performed by an exhausted set of organs is then imperfectly performed; at any rate, not in accordance with nature, and a foundation for indigestion and flatulency is thus laid. If a young and healthy horse has been purged to keep down the increase of flesh, what can we expect after this—but that with his digestion strong, he will make blood fast, and this will determine towards the head. If, in addition, the hay may be bad, or containing an undue portion of those grasses which may be deemed *medicinal* or poisonous, a further train of evils will arise.

Potato. As provender, this root is given to working horses in its raw state, chopped; and so best, provided the potato be well ridded of the earth; but in this volume it has been chiefly recommended as a restorative after disease, and, therefore, I advise it should be boiled, whereby its nutritive quality is increased in a tenfold ratio. By the action of fire, we carry off the *bitter principle*, which resides principally in the rinds of our cultivated potato; whilst the ordinary (and the wild potato in particular) is wholly bitter. The knowledge of this fact would, of course, induce those who desire to give tonics to serve out their potatos raw, for much the same reason

as I advise the addition of the *bitter extractive*, or *hops*, in the *linseed decoction*.

Poultice, for grease.

Fresh-burnt charcoal, unexposed to the atmosphere ..... 4 oz. pounded, in water, and kept covered,

Linseed meal ..... 12 oz.; mix, and attach to the heels affected. Absorbent of the acrid matter, alterative.

Pulse. In all disorders of long standing, as *chronic cough*, *debility* after disease, and in some acute attacks also, the variableness in the state of the pulse at one side of the horse compared to the other, will teach us not to make up our minds too hastily, least of all to apply remedies until we have balanced accounts (as 'twere) between them. The superiorly agitated state of the pulsation on one side, as compared to the quiescent or regular state of it on the other side, will point out where the pain is most acute, and, consequently, at which side the patient chiefly suffers derangement; and is, also, goodly indicative of the proper scite for rowel, seton, or blister, when this species of application may be deemed serviceable. Whilst, on the other hand, any sinking in the pulsation below the natural and usual state of the individual in health (upon turning to your *Register*) of one side below the other, shows that a languid disorder of some viscus, perhaps of a limb, on that side, affects it through *contiguity* merely, or the companionship and sympathy always existing between certain *parts* with each other, *pro* and *con*, in the horse —as much as in any other animal, man not excepted.

An observation or two on blood and bleeding, though not exactly in place here, cannot be unacceptable to the juniors of the stable.

If an *artery* has been divided, as hath happened to clumsy operators cutting through the neck vein, and the artery that passes underneath it, the blood issuing from the wound may be known by its not coagulating, and separating as venous blood does. It then also flows with a jerk, in unison with the PULSATION, and not flowing in a

regular stream, like that issuing from a vein. When this accident happens, or any other that divides an *artery*, pinch up the orifice *above* and *below*, and tie up each with silk thread; taking up that which flows most first, being that which is *nearest the heart*, or above.

Remember these *rules*:—1. The fleams should be kept always in good order and clean, and nothing left to accident. 2. Always give purging physic after bloodletting, and the mild purge is best, in general. 3. After a run do not pretend to pass judgment on the state of the PULSE, nor bleed immediately after, unless in case of a complete *knock-up*. 4. You may bleed after a bad fall, or a contused wound; though the pulse be not much quickened by the accident, it will then be irregular; in cases of incised wounds do not bleed, since enough usually escapes at the wound, of sword-cuts in particular. 5. If the blood in the *graduated measure* be very hard, with buff at top, the animal *may* be bled again, provided THE PULSE does not subside: it indicates high fever; but the necessity for again physicking, is not now so apparent as at first: it now debilitates. 6. Do not bleed four or five times following for any disorder whatever, as they did at *the College* lately; the propriety of even three such operations is very doubtful. 7. If the blood scarcely coagulates, the poor creature ought not to have been bled at all. 8. If *costiveness* prevail with the fever, in any degree, give castor oil previously, if you cannot wait for a bran-mash or two; and if very costive with induration of the dung, a pint, or more, of the oil ought to precede the bleeding an hour or two, and, perhaps, the sphincter, or lower gut, be relieved by the *manual operation:* these sometimes supersede the necessity of bleeding at all—and so best.

Upon bleeding in cases of inflammation of the lungs, if the subsequent purgation be very strong, it occasions a *change in the seat of the disorder* from the lungs to the intestines, the progress whereof to mortification it is very difficult and sometimes impossible to stop.

Regimen has been frequently spoken of, and means

the rule or manner of living, generally, but is particularly serviceable in restoration to health after sickness. Change of food according to circumstances, and adapting these to the medicaments employed, to the degree of ailment, and to his work, is always beneficial to the convalescent horse. The usual regimen is strengthening and nourishing; a cheering regimen consists of better oats and more in quantity, or these given in the form of stout oatmeal-gruel (the *White Water*, No. 4;) also, beans broken, and malt-mashes: next the *cordials*, as ale, the *White Water*, No. 5, &c. Lastly, comes the *cooling regimen*, not less serviceable in its way than the former, and equally indispensable for horses recovering from inflammatory disorders. This consists of green food, succulent grasses, herbs, and plants, with bran-mashes; clover, vetches, sainfoin, *potatos*, *lettuce*, *carrots*, and *mangel wurzel*. Turn to each of these latter *heads* of information above, and see INDEX for *Regimen;* consult, also, *Tonics* for the bracing regimen.

Roller Bandage, for legs. [See *Lotion*, page 246.]

Salt. 1. We do not yet appreciate sufficiently the value of salt as a restorative after those internal inflammations to which the horse is (more than other animals) subject. When the tone of the stomach is lost, or so much impaired that the animal eats his food listless of the usual relish, salt 2 oz. per day, in the corn, will improve the appetite, and of course put on flesh, with a sleek coat: though to the amount of 6 oz. per day were given by Mr. Curwen, M. P. for Carlisle, to his working-horses with the most beneficial results. *A drench* is required to be substituted for the dry salt, occasionally, as descending more immediately to the intestines, unless the horse will drink salted water freely. *Hay*, when salted, horses eat with avidity: see *Hay*, mow burnt.

2. Somewhat less than the proportion of a pound of domestic salt to a gallon of water, given daily, operates as a purgative and purifier; but when used upon provender, about one half this strength is sufficient to sweeten and preserve it. From the end of *February* to

May, the horses were fed on cut hay, thoroughly wetted with this salt water. On taking them up from grass, it was the practice of the same gentleman to give his horses a mixture of cut wheaten straw and potatos, wetted with the strongest salt water; and with this treatment, without corn or hay, they looked well and were quite efficient for all kinds of farm work.

3. The process for preparing the fodder, is to fill a moderate sized tub with water salted as above directed. Then fill a *wicker basket* with the provender, and pour the salted water from the tub with a wooden bowl, over the basket of provender repeatedly, until the whole mass is thoroughly wetted. After it has done dripping, let it be given to the horses and they will eat it with avidity. Besides the foregoing, change from those substances, to mangel wurzel and straw for a time; and for hunters and riding-horses *hay* served in this manner is much relished, as well as giving greater appetite to their corn of these better sort of horses, which may have been *off their feed*. But, if not so, the corn that is taken with a good appetite shall do more good, all to nothing, than when eaten without it.

Stables, infected. Those wherein fever patients have been confined, as well as those with the much-dreaded epidemic, the glanders, and other diseases deemed infectious, may be cleared of the noxious effluvia by employing the following recipe:

Take of saltpetre, powdered..... 2 oz.
Oil of vitriol ..... 2 oz.

Place the saltpetre in a basin, on a hot earth, or hot iron, and mix, by pouring on a sixth part of the vitriol at a time, stirring the mixture with a tobacco-pipe. Then a like portion at another part of the stable, and then another, until the vitriol is expended; taking the precaution to secure the windows and doors, that the evaporation which rises may be detained until the stable is filled with it. All steel furniture must be removed, to prevent its getting rusty.

Sweating-Powders. The preparations of antimony affect the insensible perspiration, one of which will be

found under *Fever-Powder;* others, in the form of *balls*, are prescribed below; and both must be given on several successive days. [See *Alterative.*] If the horse be then clothed up and put to strong exercise, with the sweaters on, he will perspire freely; but great care is required on returning to stables, that he be rubbed and wisped completely dry, or the remedy will become worse than the disease. After this, the medicine is to be laid aside, until a new course of the alterative be deemed necessary.

Sweating-Balls; proper for disorders of the skin, and such as will procure a fine looking coat at any time, though not to be had recourse to upon every trivial occasion.

No. 1. Opium ..... 3 drachms,
Tartarised antimony ..... 2 oz.
Ginger, powdered ..... 1 oz.
Syrup, enough to make into six balls.

No. 2. Emetic tartar ..... 6 drachms,
Ginger, powdered ..... 1 oz.
Opium ..... 1 oz.
Oil of carraway ..... 1 drachm;

mix with treacle enough to form a mass for four balls, to be given daily in succession.

Thermometer. This instrument, for measuring the degree of heat that may prevail in the stable, has been already spoken of, and recommended to be kept in constant use. Its place is as near the centre of the stable as possible, five or six feet from the ground, at the end of a stall, perhaps, where it may be consulted with ease. On each side of the instrument may be nailed a rib of wood of its own thickness, to defend it from accidents. The mean temperature may be taken at sixty, or less for working cattle; half breds require sixty-five degrees in winter, though much will depend upon their having been at grass, or otherwise exposed, when the glass should be still lower; bare seclusion from *the wind*, occasioning a glow of heat from the bodies of such horses, that soon warms the stable even beyond a desirable degree. *Thorough breds* can bear seventy degrees in

winter, and I have observed an Arab, reared in India, (Sir John Malcolm's present to His Majesty) exceeding chilly, even when the stable felt but little below this degree of temperature. Generally speaking, old horses and foals stand in need of warmer stabling than young and middle-aged horses of their respective breeds; if they are removed from such to less comfortable habitations, they fall off *in condition*, whatever their comforts in other respects: even full clothing does not seem to remedy the atmospheric defect, whence I infer that we must attribute their chilliness to the tender (coddled) state of the organs of respiration.

Tonics. Medicines that are supposed to restore the lost tone, or right healthy feeling of any particular organ (principally of the stomach) as well as the whole system, as happens after fever or inflammation, receive this name. But their efficacy has been denied, without any reason assigned, by B. Clark, and one or two more; an opinion they must have formed from improperly giving them too soon, before the patient has been recovered sufficiently, I apprehend, and not discriminating between the *medicinal tonics* and those which we term *the natural*, as air, gentle exercise, green food, and the *cooling regimen*. Consult INDEX under all those heads of information, and read over the arguments on *tonics*. These medicines are always given as *alteratives*, i. e. in small and continued doses, are all of a bracing nature, and heighten or increase *the tone*, when deemed in too low or relaxed a state: in this view, *cordials* may be considered as tonic. On the contrary, *the natural tonics* just enumerated contribute their aid to lower, cool, or assuage the already excited animal system, and are thus found serviceable when the tone or tension of the intestines and stomach eminently exceed the healthy state. Of the manner in which this latter course operates on diseases of the *kidneys*, the sources of so many other ills, a few hints fell out in *Conversation* xi. and elsewhere; so, young and vigorous horses, which suffer through excessive heat, would be benefited by those

which lower the tone, whilst the *medicinal tonics* I now give the form of making would inevitably do harm.

Tonic Medicines.

No. 1. Jesuit's bark ..... 6 oz.
Ginger ..... 1½ oz.
Salt of tartar ..... 3 drachms ;
mix with syrup, and divide into six balls; one to be given daily.

No. 2. Salt of steel ..... 6 drachms,
Columbo root ..... 4 drachms,
Cascarilla ..... 3 drachms,
Oil of carraway ..... 20 drops; mix for two balls; to be given as before.

No. 3. Arsenic (white) ..... 20 grains,
Ginger ..... 2 drachms,
Aniseeds, powdered ..... 1 oz.
Compound powder of hagacanth .. ½ oz. ; mix with syrup enough to form the ball for two doses. This is a very bracing preparation, and need not be continued long ; for *arsenic* (although given to the horse in much larger doses) is a very dangerous material in unskilful hands.

All bitters are *tonic*, if given in the alterative manner, as aloes, in very small quantities. So are bitter herbs, plants, and grasses, as *tansy* and *wood betony*, and many others, which might be given to the horse, when this class of medicines are required. In most cases, these vegetable tonics do more good to *the stomach* than *medicinal tonics*, particularly if these are made up very hard.

Urine Balls, vulgarly, generally, but very ungenteelly, called "pissing balls." Those which are commonly prescribed and kept, are all of the stimulant kind—resin, and soap, and turpentine forming the bases of most of those sold in the shops. We have already spoken concerning these matters under the head of *kidneys* and *urinary diseases*, and prescribed several formulæ of the cooling kind, under the head of *diuretics*, and only mention these here under their vulgar appellation, to

guard the unwary against stimulating the tenderest organ of vitality in the horse, persuaded, as we are, of the absolute destructiveness of such medicines when inconsiderately given. Have they not enough of resin and alkali in the preparations of purgatives—of aloes, for example?

Water. Much has been said of water, and its varieties in *Conversation* v.; yet do we not deem that a work of supererogation which subjoins the following testimony of an evidently practical man, whose name we are precluded from affixing to his communication.

Cold water given to horses when they are very hot is decidedly injurious to them; but where it happens one of these noble animals are hurt by this means, hundreds are brought to premature weakness, and subjected to the most troublesome diseases, by not having more than half the water given them which they require. Many ignorant grooms have got a notion (as beneficial to the horse-doctors as injurious to the horses) that it is wondrous wise to allow their steeds but little water, and moreover, generally give each horse under their care precisely the same quantity. Masters would do well sometimes to condescend to look into these matters, or appoint a servant of superior judgement to do so for them; because it is an undeniable fact, that hardly any two horses in twenty require the same quantity of water to keep them in health and beauty; and it has seldom been known that any horse when cool can by any means be induced to drink one drop more than is good for him. Water scarcely milk warm may at any needful time be given with safety, however heated the horse may be.

White Water, No. 1. Water is sometimes sought to be corrected of any objectionable quality by the admixture of other substances with it, as fine pollard, oatmeal, and wheat-meal or flour, or any farinaceous substance. These may also be increased in their proportions to render the water more nutritious, palatable and welcome to the ailing animal, for whom they are principally designed; and then commonly dressed by boiling, in which form they are found extremely useful,

not only in restoring health, but in preserving it to animals of value.

I have classed them together under the *colour*, though other distinctive names are applied to each; because they cast some light upon each other, and 'tis not uncommon to mix the materials together and with *other substances*, the intention being to coax the horse to drink, when he will not otherwise do this sufficiently nor voluntarily, as it is most desirable that he should; to which end he may be served in the dark, or shady side of his stall, and if he refuse the medicated drinks, he may be kept without water until he takes that which is designed to operate as a curative. One other reason, why these should be taken into consideration together, is, that the groom administers the one or the other, in their several cases, without condescending to inform those around him which he has thought proper to adapt to this or that particular purpose. Their knowledge then extends no farther than the view of *white water*.

No. 2. *Bran* is the lowest of these in the scale of nutritiveness; a very small quantity (a handful) being sprinkled into near a pail of water and stirred up with a stick, takes off the rawness of the water, but can bring about no sensible effect on the stomach as a medicated diet; *bran* being little better than the outer skin of the wheat, though the finer and whiter sort, termed *pollard*, assumes to be a superior article. When made into *a mash*, in the proportion of a peck to a stable pail-full of water, however, it is found mildly *laxative;* and, being given previous to the administering of purgatives, dissolves the hard dung preparatory to its complete elimination *per force* of the action of aloes and its admixtures. If given in good quantity, the day previous to physicking with this drastic medicine, less by one-fourth the number of drachms usually prescribed will suffice, whilst producing the same effects—save that of racking or "excoriating the guts;" as was set forth in *Conversation* viii. (page 108).

Make the *bran-mash* by pouring on scalding water, mix it well up with the hands until all be saturated,

then pour the pail full of boiling water, stirring with a stick until the whole is of a homogeneous *mass*. Cover down, and permit it to cool, or nearly so, previous to using; but that is one among them any mistaken notions which induces many persons to give this or any other mash to the animal *hot*, under pretence of *steaming the head;* for this treatment of the *strangles* and *sore throat* though rational enough and very proper, did not include swallowing the mash! Instructions at large for applying this remedy in the most efficacious manner, were given in the "Veterinary Surgeon," (with a cut) at page 349. *Bran-mashes* should be given, thin, on the *physic day*, to work it off; they also form an eligible diet in all inflammatory complaints whatever that produce general heat or fever. When the physic ceases working, as also when the fever is abated, the mash is to be rendered more nutritious and acceptable by the addition of sugar, of honey, of oats, or malt: or the mash may be made of either of these latter, entirely, or mixed together, when it is desirable to recruit the patient's strength.

No. 3. *Malt-mash* is to be prepared in the same way as *bran-mash;* taking greater care, however, that the first wetting be not too hot, as in this case the malt would clot and *shut up*. In truth, this malt-mashing is no more than the process of brewing in its first stage.

No. 4. *Water-gruel* is the name bestowed upon the *white water* made from oat-meal, and is the best adapted to the horses' constitution, in a general way, of this whole class of restoratives. Of course, the manner of making it *properly* deserves attention, lest it fall short of its acknowledged effect, and thus disgrace the character of the very finest dietetic ever prescribed for horse or man. We have placed it here along with the *white waters* and other *mashes* in order to impress the reader with the necessity of making and serving it up *white*, and not tinged as is too often the case with the dark hue of a smoky fire, nor the pinky blush of a fierce one. The horse of delicate nose, as all well-bred ones are, would reject the former, or any other beastly commixture, which would compel having recourse to the now

objectionable drenching horn; and as to the gruel which bears the appearance of being *burnt*, its effect on the stomach would be to increase the disorder it is otherwise calculated to subdue; the animal's superabundant heat, and the caloric that then resides in the gruel, bear near affinity to each other. If, after all this care, the *gruel* assume a dark tinge, we may conclude that the meal is of bad quality and ought to be rejected.

Gruel for the horse requires to be given thin; at any rate, he will not drink it freely when made too thick; though when made of the following proportions, and the lads of the stable desire to partake with their horses, and like their gruel a little stiffer, they may accomplish this by suffering it to simmer awhile over the fire uncovered, whereby the water evaporates.

Gruel is composed of oats, water, and salt, only; but if aught else be added, it ceases to be "gruel;" excepting perhaps sugar, honey, or treacle, when we should term it "sweetened gruel." I mention this, because some fellows *(and hussеys)* make this invaluable dietetic their apology for dram-drinking. To make a four gallon pail full, take a quart of oatmeal, which mix with an equal quantity of cold water; pour on with one hand whilst mixing with the other, and if the gruel absorb the whole of the water, without being intimately mixed, take this as proof that the meal is unusually farinaceous and therefore more nutritious than ordinary, the contrary if not so. After two or three minutes careful stirring, add another quart of water; stir again, and add more water; stir on, whilst adding to the remainder of the water, and continue for five minutes at least; add salt, one table spoonful. Upon pouring the whole into the boiler a residue of hard substances will be found at the bottom of the pail; these may be profitably thrown away, for reasons assigned in the course of *Conversation* ix. as regards urinary calculus. Let the fire be neither fierce nor smoky. The stirring about must not cease above a minute, from the moment the pot is put over, to that in which boiling is evident, when the gruel is done enough; though it may remain par-

tially over the fire any time longer, though with no additional benefit, most certainly without any hope of amending any neglect of the foregoing instruction. Compel *the maker* to take a feed of his handy work—for evident reasons: it insures care and cleanliness, at least; he will then require *sugar* or a *ground-ash*, and ought to have his deserts.

When *gruel* may not be prescribed for its own inestimable virtues, it will be found an excellent vehicle for medicines of nauseous taste or obnoxious smell, as likewise to defend the passage from others which may be acrimonious. All the *tonics*, disguise them as we may, are evidently in this predicament; nor is it every one of the *cordials* that is agreeable to every horse-palate, which also becomes more delicate in sickness.

No. 5, *Scouring-water*, so called of old, and liable to some objections, (of which I have spoken elsewhere,) was nevertheless used with profitable results for hunters which had put on too much flesh, and were over full of hard meat. To make the mass—take

Aniseeds	2 oz.	
Grains of paradise	1 drachm,	all in powder,
Cummin seeds	½ oz.	and sifted.
Fenugreek seeds	1 oz.	
Flower of sulphur	2 oz.	

Mix intimately with the following:—

Olive oil	1 pint,
Honey	1 pound,
Sherry, *wine*	2 ordinary bottles,

with as much oatmeal as will make the whole into a stiff homogeneous mass, and preserve it for use in ox-bladder. Here is enough for five services; therefore take one-fifth, and mix in half a pail of water, and present to the horse out of the light. After the first taking, he will never after refuse, but drink it with avidity.

No. 6. *Wheat-flour* makes an excellent nutritious *white drink* for animals given to *scour*, by being mixed with their water; and better still in such an ailment, if made into *gruel*, in the manner directed above for *oatmeal*. But when given very stiff, and in large quantity, as is done

in cases of violent purgation from an overdose of aloes, is liable to clot upon the stomach of the horse; a very dangerous event that goes to the life of the animal, by stopping up the lower orifice; and which can be avoided if the *flour* be previously *cooked*, by boiling or otherwise. For this purpose, tie up, in a cloth, such a quantity of the dry flour of wheat as may be deemed requisite, after the manner of a *pudding*. Boil this three or four hours, when it will come forth a hard ball, that may be preserved in this state fit for use many months, and either broken to pieces and mixed with water, when wanted, or grated with a grater. In this form, wheaten-flour is more readily prepared as a *gruel* than from the meal or the flour, upon cases of emergency, as spoken of, in cases of inflammation of the *intestines*, of overdosing the patient with aloes, &c. when every minute of delay is replete with fresh danger.

ANALYTICAL INDEX

TO THE

FOREGOING CONVERSATIONS.

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